

UNIVERSITY OF ARKANSAS BULLETIN

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# Annual Catalog

## 1916-1917



### ANNOUNCEMENT

1917-1918

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# UNIVERSITY CALENDAR

1917-1918

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1917

September 17-18, Monday-Tuesday	Special, make-up, and entrance examinations
September 19-22, Wednesday-Saturday	Registration
September 24, Monday	Instruction begins, 8:00 a. m.
November 29, Thursday	Thanksgiving holiday
December 20, Thursday	Christmas vacation begins, 5:00 p. m.

1918

January 3, Thursday	Christmas vacation ends, 8:00 a. m.
January 26, Saturday	First semester examinations begin
February 2, Saturday	First semester closes, 5:00 p. m.
February 4, Monday	Second semester opens, 8:00 a. m.
March 28, Thursday	Easter vacation begins, 5:00 p. m.
April 2, Tuesday	Easter vacation ends, 8:00 a. m.
June 1, Saturday	Second semester examinations begin
June 9, Sunday	Baccalaureate sermon
June 12, Wednesday	Commencement day
June 17, Monday	Summer session begins, 8:00 a. m.

## BOARD OF TRUSTEES

*The Governor of Arkansas*-----*Ex-Officio*

CHARLES H. BROUGH, Little Rock

*The State Superintendent of Public Instruction*-----*Ex-Officio*

JOHN L. BOND, Little Rock

*Expiration  
of Term*

JAMES D. HEAD, Texarkana-----1919

JOE K. MAHONY, El Dorado-----1919

HARRY L. PONDER, Walnut Ridge-----1919

JAMES K. BROWNING, Piggott-----1921

Z. LYTTON REAGAN, Fayetteville-----1921

A. B. BANKS, Fordyce-----1923

FRANK PACE, Little Rock-----1923

### OFFICERS

Chairman-----Governor CHARLES H. BROUGH

Secretary and Auditor-----WILLIAM H. CRAVENS, Fayetteville

### COMMITTEES

*Executive Committee*—Governor Brough, Chairman; Messrs. Mahony, Pace, and Reagan.

*Finance Committee*—Mr. Banks, Chairman; Messrs. Head and Reagan.

*Teachers' Committee*—Mr. Bond, Chairman; Messrs. Mahony and Head.

*College of Agriculture*—Mr. Browning, Chairman; Messrs. Ponder and Pace.

*Buildings and Grounds*—Mr. Ponder, Chairman; Messrs. Reagan and Browning.

*Branch Normal School*—Mr. Bond, Chairman; Messrs. Banks and Mahony.

*Medical College*—Mr. Bond, Chairman; Messrs. Head and Ponder.

*Board of Control of the Agricultural Experiment Station*—The Committee on the College of Agriculture, the President of the University, and the Director of the Experiment Station.

*Committee on Agricultural Extension*—Mr. Browning, Chairman; Messrs. Banks and Pace.

## OFFICERS OF ADMINISTRATION

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Note.—The first date after a title indicates the year of appointment to present rank; the second date, the year of first appointment to any position in the University. Where the two coincide, only one date is given.

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JOHN CLINTON FUTRALL, B. A., (University of Virginia), M. A.  
(University of Virginia).

*President*, 1913, 1894.

WILLIAM NATHAN GLADSON, B. M. E. (Iowa State College),  
E. E. (Iowa State College), Ph. D. (McLemorsville College).

*Vice-President and Dean of the College of Engineering*,  
1914, 1894.

THORGNY CEDRIC CARLSON, B. A. (University of Minnesota).

*Registrar*, 1915.

ARTHUR MCCrackEN HARDING, B. A. (University of Arkansas),  
M. A. (University of Chicago), Ph. D. (University of Chicago).

*Examiner*, 1916, 1905.

WILLIAM HAMPTON CRAVENS,

*Auditor and Secretary to the Board of Trustees*, 1911.

JULIA RAMSEY VAULX, B. A. (University of Arkansas), M. A.  
(Cornell University).

*Librarian*, 1914.

GEORGE WESLEY DROKĒ, B. A. (University of Arkansas), M. A.  
(University of Arkansas).

*Dean of the College of Arts and Sciences*, 1915, 1880.

MARTIN NELSON, B. S. A. (University of Wisconsin), M. S.  
(University of Wisconsin).

*Dean of the College of Agriculture and Director of the  
Agricultural Experiment Station*, 1913, 1908.

JAMES RALPH JEWELL, B. A. (Coe College), M. A. (Coe College),  
Ph. D. (Clark University).

*Dean of the College of Education*, 1913.



- \*JOHN HAROLD MILLER, B. A. (Central Normal College, Indiana).  
*Director Division of Extension, 1915.*
- WILLIAM CASPER LASSETTER, B. S. A. (University of Wisconsin).  
*Acting Director Division of Extension, 1916, 1910.*
- MARY ANN DAVIS,  
*Dean of Women, 1911.*
- FREDERICK GOTTLIEB BAENDER, B. M. E. (Iowa State University),  
M. M. E. (Cornell University).  
*Superintendent of Mechanic Arts, 1916.*
- NOAH FIELDS DRAKE, C. E. (University of Arkansas), B. A.  
(Leland Stanford, Jr., University), M. A. (Leland Stanford,  
Jr., University), Ph. D. (Leland Stanford, Jr., University).  
*Curator of the Museum, 1912.*
- NINA VASHTI HARDIN, B. A. (University of Arkansas), M. D.  
(University of Arkansas).  
*Superintendent of the Infirmary, 1910.*
- THOMAS THURMON MCCONNELL, B. S. A. (Purdue University).  
*Director of Athletics, 1915.*
- JUANITA MOORE,  
*Secretary to the President, 1911.*
- FANNIE S. PARK,  
*Superintendent of Carnall Hall, 1907.*
- JESSIE BLOCK WARNER,  
*Superintendent of Men's Dormitories, 1914.*
- MARGARET NANCY WILSON, B. A. (Park College).  
*Secretary of the Young Women's Christian Association,  
1912.*

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\*Resigned, October 26, 1916.

## FACULTY

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Note.—The first date after a title indicates the year of appointment to present rank; the second, the year of first appointment to any position in the University. Where the coincide, only one date is given.

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CARROLL FALCONER ARMISTEAD, Major of Infantry, U. S. A.,  
B. A. (University of Arkansas).

*Professor of Military Art and Head of Department of  
Military Art, 1916.*

WILLIAM EMMET AYRES, B. S. (Alabama Polytechnic Institute),  
M. S. (Alabama Polytechnic Institute).

*Instructor in Agronomy, 1916.*

FREDERICK GOTTLIEB BAENDER, B. M. E. (University of Iowa),  
M. M. E. (Cornell University).

*Professor of Mechanical Engineering and Head of De-  
partment of Mechanical Engineering, 1916.*

\*WILLIAM BAHR, Sergeant, First Class, Medical Department,  
U. S. A. (Retired).

*Assistant in Military Art, 1916.*

PERCY BOUSFIELD BARKER, B. A. (University of Nebraska),  
M. A. (University of Nebraska).

*Professor of Agronomy and Head of Department of  
Agronomy, 1916.*

MARY CUMMINGS BATEMAN,  
*Instructor in Voice, 1905.*

†GEORGE GROVER BECKER, B. S. (Maryland Agricultural College),  
B. S. A. (Cornell University).

*Assistant Professor of Entomology in charge of Depart-  
ment of Entomology, 1914, 1910.*

MABEL CLAIRE BELL,  
*Assistant in Piano, 1909.*

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\*Resigned, April 1, 1917.

†Member of Experiment Station Staff.

WALTER MATTHEW BRISCOE, B. A. (Ouachita College).

*Professor of German and Head of Department of German, 1911.*

BERNARD BROWN, B. A. (University of Nashville), M. S. (University of Chicago).

*Instructor in Physics, 1914.*

HUGH ALEXANDER BROWN, B. S. (University of Illinois), M. S. (University of Illinois).

*Instructor in Electrical Engineering, 1915.*

CATHERINE ABNEY CABEEN, B. A.. (University of Arkansas).

*Assistant in English, 1916.*

†GEORGE LESLIE CALDWELL, D. V. M. (Michigan Agricultural College).

*Instructor in Veterinary Science, 1915.*

JOHN HENRY CLOUSE,

*Instructor in Mechanical Engineering, 1916.*

WILLIE VANDEVENTER CROCKETT,

*Instructor in Expression, 1905.*

GEORGE CHESTER CURTISS, B. A. (Northwestern University), M. A. (Harvard University).

*Instructor in English, 1915.*

JOHN FRANCIS DANNER,

*Assistant in Mechanical Engineering, 1916.*

MARY ANN DAVIS,

*Instructor in English, 1911.*

JAMES DINWIDDIE,

*Assistant in Mechanical Engineering, 1916.*

NOAH FIELDS DRAKE, C. E. (University of Arkansas), B. A. (Leland Stanford, Jr., University), M. A. (Leland Standord, Jr., University), Ph. D. (Leland Stanford, Jr., University).

*Professor of Geology and Mining Engineering and Head of Departments of Geology and Mining Engineering, 1912.*

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†Member of Experiment Station Staff.

GEORGE WESLEY DROKE, B. A. (University of Arkansas), M. A. (University of Arkansas).

*Professor of Mathematics and Head of Department of Mathematics, 1897, 1880.*

BOLLING JAMES DUNN, B. A. (Bethel College), M. A. (Bethel College).

*Associate Professor of Mathematics, 1898, 1894.*

†HENRY EDMUND DVORACHEK, B. S. A. (University of Minnesota).

*Professor of Animal Husbandry and Head of Department of Animal Husbandry, 1915.*

†WALTER SAMUEL FIELDS, B. S. (Michigan Agricultural College).  
*Instructor in Plant Pathology, 1913.*

ELIZABETH JACKSON GALBRAITH, B. A. (West Tennessee Christian College).

*Instructor in Art, 1906.*

WILLAM NATHAN GLADSON, B. M. E. (Iowa State College), E. E. (Iowa State College), Ph. D. (McLemorsville College).

*Professor of Electrical Engineering and Head of Department of Electrical Engineering, 1895, 1894.*

†ROLAND M. GOW, D. V. M. (Ohio State University).

*Professor of Veterinary Science and Head of Department of Veterinary Science, 1916, 1909.*

JAMES RICHARD GRANT, B. A. (University of Arkansas), Ph. B. (Northern Illinois Normal College), M. A. (University of Chicago).

*Assistant Professor of Education and Director of the Training School, 1914, 1912.*

JAMES SAMUEL GUY, B. S. (Davidson College), M. A. (Davidson College), Ph. D. (Johns Hopkins University).

*Professor of Chemistry and Head of Department of Chemistry, 1916.*

JOHN LEONARD HANCOCK, B. A. (University of Chicago), M. A. (Indiana University), Ph. D., (University of Chicago).

*Instructor in Ancient Languages, 1915.*

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†Member of Experiment Station Staff.



DAVE HANSARD,

*Assistant in Violin, 1916.*

ARTHUR McCracken HARDING, B. A. (University of Arkansas),  
M. A. (University of Chicago), Ph. D. (University of Chi-  
cago).

*Professor of Mathematics, 1916, 1905.*

MARY GARNETT HARGIS,

*Instructor in Romance Languages, 1911, 1908.*

†CLYDE HARMON HEARD, B. S. A. (University of Idaho), M. S.  
(University of Idaho).

*Assistant Professor of Horticulture, 1915.*

†FREDERICK HERMAN HERZER, B. S. A. (Ohio State University).

*Instructor in Animal Husbandry, 1915.*

†JOSEPH LEE HEWITT, B. S. A. (University of Missouri).

*Professor of Plant Pathology and Head of Department  
of Plant Pathology, 1910, 1905.*

JOBELLE HOLCOMBE, B. A. (University of Arkansas), M. A.  
(Cornell University).

*Instructor in English, 1914, 1907.*

FRED HORSTEN, Sergeant of Infantry, U. S. A.

*Assistant in Military Art, 1916.*

†DE FOREST HUNGERFORD, B. S. (Kansas State Agricultural Col-  
lege), M. S. (University of Minnesota).

*Assistant Professor of Agronomy, 1915.*

CAROLINE LOUISE JENKS, B. A. (University of Michigan).

*Instructor in Education, 1916.*

JAMES RALPH JEWELL, B. A. (Coe College), M. A. (Coe Col-  
lege), Ph. D. (Clark University).

*Professor of Education and Head of Department of  
Education, 1913.*

VIRGIL LAURENS JONES, B. A. (University of North Carolina),  
Ph. D., (Harvard University).

*Professor of English and Head of Department of English,  
1915, 1911.*

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†Member of Experiment Station Staff.

- ARTHUR MELVILLE JORDAN, B. A. (Randolph-Macon College),  
M. A. (Trinity College, North Carolina).  
*Assistant Professor of Education, 1915, 1914.*
- JULIUS JAMES KNOCH, B. S. (Grove City College), M. S. (Grove  
City College), C. E. (Cornell University).  
*Professor of Civil Engineering and Head of Department  
of Civil Engineering, 1896, 1893.*
- VIRGIL PROCTOR KNOTT, B. C. E. (University of Arkansas).  
*Associate Professor of Civil Engineering, 1907, 1904.*
- ALFRED EDWIN LUSSKY, B. A. (Concordia College, Indiana),  
B. D. (Concordia Theological Seminary, Missouri), M. A.  
(University of Illinois).  
*Instructor in German, 1915.*
- ANTONIO MARINONI, B. A. (Desenzano, Italy), M. A. (Yale  
University).  
*Professor of Romance Languages and Head of Department  
of Romance Languages, 1906, 1905.*
- †CLIFFORD LESLIE MCATHUR, B. S. (Oklahoma Agricultural and  
Mechanical College), M. S. (University of Idaho).  
*Assistant Professor of Bacteriology and Pathology in  
charge of Department of Bacteriology and Pathology.  
1915, 1913.*
- EVELYN JOAN METZGER,  
*Assistant in Art, 1910.*
- MARY ELIZABETH METZGER,  
*Assistant in Home Economics, 1914.*
- CLARA MILLER, Ph. B. (University of Chicago).  
*Instructor in Physical Education for Women, 1912.*
- WILSON LEE MISER, B. A. (University of Arkansas), M. A.  
(Yale University), Ph. D. (University of Chicago).  
*Assistant Professor of Mathematics, 1915.*
- BRAINERD MITCHELL, JR., B. M. E. (University of Arkansas),  
M. E. (University of Arkansas).  
*Assistant Professor of Mechanical Engineering, 1908, 1905.*

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†Member of Experiment Station Staff.

OWEN MITCHELL,

*Assistant in Theory of Music and Piano, 1913.*

HUGH ELLIS MORROW, B. S. A. (University of Arkansas).

*Associate Professor of Chemistry, 1907, 1904.*

WALLACE CARL MURPHY, B. A. (University of Arkansas), M. A. (University of Chicago).

*Assistant Professor of History and Political Science, 1913.*

EDWIN GRISWOLD NOURSE, B. A. (Cornell University), Ph. D. (University of Chicago).

*Professor of Economics and Sociology and Head of Department of Economics and Sociology, 1915.*

†LYNN WESLEY OSBORN, B. S. A. (Iowa State College).

*Assistant Professor of Agronomy, 1916, 1913.*

RUTH ANNETTE PECK, B. S. (University of Wisconsin).

*Instructor in Home Economics in charge of Department of Home Economics, 1915.*

FRANK WELLBORN PICKEL, B. A. (Furman University), M. S. (University of South Carolina), M. Sc. (University of Chicago).

*Professor of Biology and Head of Department of Biology, 1899.*

†JAMES BURNES RATHER, B. S. (Agricultural and Mechanical College of Texas), M. S. (Agricultural and Mechanical College of Texas), M. A. (Johns Hopkins University).

*Professor of Agricultural Chemistry and Head of Department of Agricultural Chemistry, 1915.*

†RICHARD HENRY RIDGELL, B. Sc. (Clemson Agricultural College).

*Instructor in Agricultural Chemistry, 1916.*

GILES EMMETT RIPLEY, B. S. (Purdue University), M. S. (Purdue University).

*Professor of Physics and Head of Department of Physics, 1908.*

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†Member of Experiment Station Staff.

†HERMAN AUSTIN SANDHOUSE, B. S. A. (Colorado Agricultural College).

*Instructor in Animal Husbandry, 1915.*

ELIZA ELLA SEARS, B. S. E. (University of Arkansas).

*Assistant in Education, 1916.*

KATE WITHERS SIMPSON,

*Assistant in Education, 1910.*

WILLIAM BOYD STELZNER, B. E. E. (University of Arkansas),  
E. E. (University of Arkansas).

*Adjunct Professor of Electrical Engineering, 1909.*

SAMUEL RODMAN STOUT, B. S. A. (University of Arkansas).

*Instructor in Animal Husbandry, 1917, 1916.*

HENRY HARRISON STRAUSS, B. A. (Wooster College), M. A.  
(Tulane University).

*Professor of Ancient Languages and Head of Department of Ancient Languages, 1914, 1913.*

HARRY ELWYN STURGEON, B. A. (Cooper College), M. S. (Purdue University).

*Assistant in Chemistry, 1916.*

DAVID YANCY THOMAS, B. A. (Emory College), M. A. (Vanderbilt University), Ph. D. (Columbia University).

*Professor of History and Political Science and Head of Department of History and Political Science, 1912, 1907.*

BURR WALTER TORREYSON,

*Professor of Secondary Education, 1909.*

HENRY DOUGHTY TOVEY,

*Professor of Theory of Music and Piano and Director of Department of Fine Arts, 1908.*

JULIAN SEESEL WATERMAN, B. A. (Tulane University), M. A. (University of Michigan).

*Instructor in Economics and Sociology, 1914.*

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†Member of Experiment Station Staff.



JOSEPH WHEELER, Sergeant, First Class, Medical Department,  
U. S. A. (Retired).

*Assistant in Military Art, 1917.*

SAMUEL NISLEY WHITMAN, B. S. (Pennsylvania State College).

*Instructor in Civil Engineering, 1915.*

†WILLIAM HALE WICKS, B. S. A. (Oregon Agricultural College),  
M. S. (Oregon Agricultural College), M. S. A. (Cornell University).

*Professor of Horticulture and Head of Department of  
Horticulture, 1914.*

ROGER WILLIAMS, B. A. (Ouachita College), M. A. (Harvard University).

*Assistant Professor of English, 1914, 1911.*

\*BIRTON NEILL WILSON, B. Sc. M. E. (Georgia School of Technology),  
M. E. (University of Michigan).

*Professor of Mechanical Engineering and Head of Department of Mechanical Engineering, 1903, 1896.*

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\*Absent on leave, 1916-17.

†Member of Experiment Station Staff.

STANDING COMMITTEES OF THE  
UNIVERSITY SENATE  
1916-1917

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*Accredited Schools*—Professors Thomas, Hewitt, Harding, Stelzner, Williams.

*Advisers*—Deans Nelson, Gladson, Jewell, Droke.

*Athletics*—President Futrall, Professors Marinoni, Armistead.

*Catalog*—Professors Jones, Ripley, Dvorachek, Jordan, Mr. Carlson.

*Commencement*—Professors Ripley, Drake, Tovey, Grant, Miss Hargis, Miss Holcombe, Mrs. Crockett.

*Discipline and Attendance*—Professors Gladson, Jewell, Armistead, Strauss, Miss Davis.

*Graduate Study*—Professors Jewell, Knoch, Barker, Marinoni, Guy.

*Honorary and Higher Degrees*—Professors Droke, Wicks, Pickel, Knott, Mr. H. A. Brown.

*Honors*—Professors Knoch, Hewitt, Nourse, Jordan, Mr. Hancock.

*Intercollegiate Debating*—Professors Nourse, Thomas, Murphy, Mr. Curtiss, Mr. Waterman.

*Library*—Professors Drake, Rather, Murphy, Mr. Curtis, Miss Vaulx.

*Schedule*—Professors Harding, Wicks, Baender, Grant, Mr. Carlson.

*Statistics*—Professors Guy, Mitchell, Stelzner, Morrow, Mr. B. Brown, Mr. Carlson.

*Student Affairs*—Professors Gladson, Jones, Dunn, Miss Davis, Miss Holcombe.

*Student Organizations*—Professors Briscoe, Strauss, Miser, Hungerford, Mr. Lussky.

*Student Publications*—Professors Armistead, Jones, Ripley, Heard, Mr. Waterman.

## GENERAL INFORMATION

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### DIVISIONS

The University of Arkansas is composed of the following divisions: The College of Arts and Sciences, the College of Education, the College of Engineering, the College of Agriculture and the Agricultural Experiment Station, located at Fayetteville; the Division of Extension and the College of Medicine, located at Little Rock; and the Branch Normal School, located at Pine Bluff

### LOCATION

Fayetteville is located in Washington County, in the northwestern part of the state, in the heart of the Ozark Mountains. The elevation of the town is about 1,500 feet. The surroundings are of great natural beauty, and the climate of the region is excellent.

Fayetteville may be reached both from the north and from the south by the Texas branch of the St. Louis and San Francisco ("Frisco") Railroad. The Muskogee division communicates with the west.

The moral and religious conditions of the community are most favorable. There are fourteen churches in the town, representing nine denominations. The pastors of these churches actively interest themselves in the moral and spiritual welfare of the students.

By an act of the general assembly of the state, the liquor traffic has been barred from Fayetteville. Intoxicating liquors cannot be sold or given away within five miles of the University.

### HISTORY

The University of Arkansas owes its origin to an Act of Congress, approved July 2, 1862, providing that public lands should be granted to the several states, to the amount of "thirty thousand acres for each senator and representative in Congress," from the sale of which there should be established a per-

petual fund, "the interest of which shall be inavoidably appropriated by each state, which may take and claim the benefit of this Act, to the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This act forbids the use of any portion of the aforesaid fund, or the interest thereon, for the purchase, erection, or maintenance of any building or buildings. The states accepting the provisions of the act are required to provide for the construction and maintenance of the necessary buildings, and for the expenses of administration in carrying out the purposes of the act.

The general assembly of the state accepted the national law by passing an act, approved March 27, 1871, which provided for the location, organization, and maintenance of the University of Arkansas. Fayetteville, Washington County, was selected as the seat, and the institution opened on January 22, 1872.

The Experiment Station owes its origin to an act of Congress of March 2, 1887 (the Hatch Act), under which the University receives \$15,000 annually for the maintenance of the experiment station "to aid in acquiring and diffusing among the people useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." In 1906 Congress passed an act increasing this appropriation by the sum of \$5,000 the first year, and providing for an additional increase of \$2,000 per annum, until such increased appropriation shall reach \$15,000 annually.

Under an act of Congress, approved August 30, 1890, the University receives \$25,000 annually, "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application to the industries of life."

On March 4, 1907, Congress passed an act increasing this



appropriation at the rate of \$5,000 per annum, until the total amount appropriated annually shall reach \$50,000.

#### RESOURCES

The University owns at Fayetteville equipment, buildings, and grounds estimated to be worth about \$750,000. The productive funds, derived entirely from federal land grants, amount to \$130,000. It receives annually from the federal government for the support of the agricultural and mechanical college \$36,363. It also receives annually from the federal government \$30,000 for the agricultural experiment station. For the biennium beginning July 1, 1917, it receives an annual state appropriation of approximately \$189,000, exclusive of extension work in agriculture and home economics. For the latter purpose it receives during the same period from the state and federal governments an appropriation of approximately \$64,000. The expenditures for all purposes for the year ending June 30, 1917, were \$292,405.55.

#### BUILDINGS AND EQUIPMENT

The campus comprises a tract of land of about one hundred twenty acres including some fifteen buildings. The University has its own heating plant and is supplied with electric light and water from the city plants.

*Dormitories.* Three dormitories are provided for the housing of men students. *Buchanan Hall* is a three-story, brick structure and contains about forty student rooms. *Hill Hall*, named in honor of Lieutenant-General D. H. Hill, C. S. A., who served as President of the University from 1877 to 1884, was erected in 1901. It is a three-story, brick structure, containing a dining hall, kitchen, and store-room, and about twenty rooms for students. *Gray Hall*, erected in 1905, was named in honor of Colonel O. C. Gray, C. S. A., sometime professor of mathematics in the University. The building is two stories in height, is built of brick, and contains rooms sufficient for about one hundred students, with parlors, a dining room, and a recreation room.

The dormitory for young women, *Carnall Hall*, erected in 1905, was named in honor of Miss Ella Carnall, Ph. D., sometime associate professor of English and modern languages in the Uni-

versity. The builing is of brick construction and has three stories. It contains rooms sufficient for about one hundred students, with parlors, a dining room, and a recreation room.

*Infirmary.* In order to safeguard the health of the students, the University has provided a well-equipped infirmary in charge of a trained nurse. This is furnished with an open ward for men, and one for women, a private ward for men and one for women, and a well-isolated contagious ward.

*Library.* The general library now occupies the south wing of the first floor of University Hall, which provides a commodious and well lighted room for study. The total number of volumes, with new accessions, is about 20,000 bound, and 2,000 unbound, exclusive of government publications. There are, in addition to the main library, departmental libraries in the College of Agriculture, the College of Education, the Departments of Mathematics, Biology, Chemistry, Geology and Mining Engineering, Physics, and Civil, Mechanical, and Electrical Engineering, devoted to these particular branches. These contain about 10,000 bound, and 3,000 unbound volumes.

*Women's Gymnasium.* For instruction in physical education for the young women students, there is provided a gymnasium in the south wing of the basement floor of University Hall. It has been equipped, as far as means were available, with modern apparatus, and is provided with lockers, dressing rooms, and shower baths.

*Athletic Field.* For the accommodation of the University football and baseball teams and spectators there is an excellent athletic field with a covered grandstand and bleachers. The baseball diamond has recently been rebuilt and greatly improved, the size of the athletic field has been almost doubled, and a first-class quarter-mile running track and football field are under construction. When the improvements now under way are completed, the facilities afforded for outdoor exercises will be sufficient for the accommodation of a large number of students.

*Armory.* The armory is a large, well-lighted room, sixty by eighty feet, occupying the entire basement of the north wing of University Hall. It is substantially furnished with arm racks, compartments for equipment, and other conveniences. The equipment consists of six hundred Krag-Jorgensen rifles; eighteen gallery rifles, 1903 Springfield model; five hundred sets of

leather infantry equipment; signal flags; non-commissioner officers' swords; and ammunition furnished by the national government. National colors, cadet officers' swords, and a set of band instruments have been purchased by the University.

*Book Store.* The book store on the first floor of University Hall carries a complete line of all required text-books and supplies for the convenience of students.

*University Hall*, erected in 1872, is the "old main building" of the University. It is five stories in height, forming three sides of a quadrangle. It contains about seventy rooms occupied by the offices of administration and the class-rooms and laboratories of the College of Arts and Sciences.

The *biological laboratory* is situated on the second floor and has accommodation for about forty students. The laboratory is furnished with work-tables, a sink, and the necessary gas fixtures for incubators, sterilizers, and similar apparatus; also with an aquarium for keeping aquatic animals and plants for observation and study. The equipment in apparatus consists of compound microscopes, dissecting microscopes, microtomes, and such other apparatus and chemicals as are needed for the practical work in biology. There is also apparatus for collecting, drying, preserving, and mounting insects. The laboratory has a number of skeletons of animals, and models and charts for teaching plant and animal anatomy.

The *geological laboratory* occupies the fourth floor. The department is equipped with maps, relief maps, minerals, and rock specimens; and with aneroid barometers, compasses, hand-levels, and pedometers, for field work. There is also a well equipped laboratory for determinative mineralogy.

The *museum* is located on the fourth floor. The contents have been collected with the view of facilitating instruction in geology and biology. That portion of the collection suitable for display is arranged in glass cases, while the working collection is in drawers. *Relief maps* have been placed in the museum for the following regions: geological relief maps of Arkansas, Colorado Canyon, central Tennessee, and the United States; a convex relief map of the United States on a section of a globe sixteen feet in diameter, relief maps of Carmel Bay, California, Ice Springs Crater, Utah, Yosemite Valley, Palestine, Mount Vesuvius, and San Francisco; and a sectional geolog-

ical relief map of the Leadville region in Colorado. The *mineral collection* contains about three thousand specimens, representing different mineral groups. The *petrographic collection* consists of a large number of specimens representing sedimentary, igneous, and metamorphic rocks, with a large collection of stone from different parts of the country. The *paleontological collection* contains a large number of invertebrate fossils representing principally the fauna of the different geological horizons in northern Arkansas. The *Major Earle Collection* of minerals and fossils was placed in the museum by Major F. R. Earle. The *zoological* and *botanical collections* consist of two hundred birds and mammals, representing eighty species; two hundred reptiles and amphibians, representing forty species; fifteen hundred fishes, representing three hundred fifty species; one thousand insects and other invertebrates, representing two hundred species; and several skeletons.

The *practice rooms* of the Department of Music are located on the fourth floor of the north wing.

*Art Studio.* The art studio is located on the third floor of the north wing. It is equipped for class-room work and practice in design, drawing, and painting.

*Chemistry Hall*, erected in 1905, is situated north of University Hall. On the first floor are laboratories for quantitative and qualitative analysis, organic chemistry, and physical chemistry, a balance-room, and a library. On the second floor is a large lecture room and a general laboratory for first year students. In the basement are store-rooms and a laboratory for assaying. All of the laboratories are provided with worktables, sinks, hoods, water, and gas.

*Peabody Hall*, the newest and most modern building on the campus, is used exclusively by the College of Education. It contains about thirty rooms planned and equipped especially for adaptation to the work of training teachers, including a manual training shop, home economics laboratories, a large assembly room, quarters for the training school, and a large and well-lighted reading room, supplied with professional books and magazines.

Ample provision has been made for the training school for teachers. Rooms are provided where children doing work of



boht elementary and high school character are taught. Any pupil residing in the state of Arkansas is eligible for admission to the University Training High School, providing that he has exhausted the school privileges of his home community. Such pupils must be at least fifteen years of age and of good moral character.

*Home Economics Laboratories.* Half a floor is occupied by the laboratories for cookery, sewing, millinery, and table service, and the reception room. The equipment in each laboratory is new and modern, chosen for its utility and convenience. It is sufficient to carry on successfully the work of the classes in the various branches of home economics.

*Engineering Hall*, erected in 1904, lies a short distance to the south of University Hall. The first story is built of native sand stone, and the upper two stories are of brick trimmed with limestone. The building contains the offices, recitation rooms, drawing rooms, and testing laboratories of the physics, and civil, electrical, and mechanical engineering departments.

The *physical laboratory* is located on the first floor. It is equipped with modern instruments in quantity sufficient for the laboratory work of the courses in physics.

The *civil engineering instrumental laboratory* is located on the first floor. It is provided with all the necessary instruments for work in land, railroad, and city surveying and office work. The equipment of field instruments has been so selected as to afford students the opportunity of becoming familiar with the instruments of the different manufacturers. Among the instruments there are a number of engineers' transits and Y levels, theodolites, transit and solar attachment, compasses, hand levels, standard and ordinary steel tapes, plane tables, sextant, and aneroid and mercurial barometers. An equipment for practical astronomy has been added, consisting of a large altazimuth, reading to seconds by levels and micrometers; a sidereal clock with break-circuit attachment; and a chronograph reading to tenths of seconds.

The *civil engineering experimental laboratory* for testing materials of construction and for work in hydraulics is situated in the northwest corner of the basement in a well-lighted room having a floor space of 2,450 square feet. The equipment for testing the quality and strength of cements and mortars in-

cludes one 2,000-pound tension machine, one 1,000-pound automatic machine, brass molds for tension compression, and transverse test pieces, storage tanks and apparatus for testing fineness, specific gravity, and activity, and for accelerated tests. The equipment for testing steel includes a 4,000-pound tension machine and a 5,000-pound transverse machine for tests on bars, and a Fremont impact testing machine. The equipment for experiments in hydraulics consists of a Pelton water wheel, an hydraulic engine, water meters, weirs, and other apparatus. The laboratory is also well equipped for making blue and brown prints of any size up to 36x64 inches.

New equipment for testing materials for roads and pavements has recently been added. This equipment is modeled after that used in the laboratory of the Office of Public Roads at Washington, D. C., and includes an impact testing machine, a cementation impact testing machine, a diamond core drill and press, a briquette machine, a ball grinding machine, a rattler for paving brick, an abrasion machine for broken stone, and other apparatus.

The *electrical engineering dynamo laboratory*, situated in the east end of the basement, affords excellent facilities for experimental work with practical machinery. The power is supplied by a 3-horsepower, vertical type, double cylinder gasoline engine and a 20 K. W. induction motor. A 60-cell, 300-ampere-hour storage battery supplies current for experiments in which absolutely steady power is desired. There are direct current dynamos and motors of the constant current and constant potential types, transformers, converters, synchronous and induction motors, with a liberal supply of measuring instruments for use with the various machines. Single, two, and three-phase alternators supply current at various voltages and frequencies.

The *electrical engineering senior laboratory* is situated on the first floor. It is supplied with direct current at 110, 220, and 500 volts, and alternating current, single phase, at 50, 110, or 220 volts, and 60 cycles; two phase, 60 cycle at 110 or 220 volts; three phase, at 110 or 220 volts, with a frequency of 60 to 113 cycles a second. A high tension testing transformer supplies current at any voltage up to 120,000 for testing of insulators, while standard cells, a Kelvin balance, and a potentiometer fur-

nish means for calibrating the laboratory measuring instruments.

Students are also permitted to inspect the plant of the Fayetteville Electric Light and Power Company, take measurements and make tests on it. Its primary mains supply the electrical laboratory with alternating current at 60 cycles and 2,000 volts.

The *photometric laboratory*, which also serves as a photographic and X-ray dark room, is supplied with standard photometer bar, Lummer-Brohun screen, and amyl-acetate standard lamp.

The *mechanical engineering laboratory* contains the following machinery: one 35-horsepower compound automatic steam engine, one Hornsby-Akroyd oil engine, one Kerr steam turbine, one slide valve steam engine, one 10-horsepower Weber gasoline engine, three small Cardinal gasoline engines made in the University shops, one 35-horsepower Westinghouse compound steam engine, one 50-horsepower Wheeler condenser with air, water, and circulating pumps, one pulsometer steam pump, and one 60,000-pound Rheile testing machine for testing materials such as wood, steel, and cast iron in tension and compression. This machine is also equipped for testing large beams of steel, concrete, or timber.

The laboratory is well provided with apparatus for experimental work, including a Mahler bomb calorimeter for testing fuels, an Orsat apparatus for flue gas analysis, a Junker calorimeter, an Olsen oil testing machine, a viscosimeter, a flash point tester, a Pitot meter, and anemometer, pressure gauges, measuring tanks, water meters, and scales.

The steam boilers used for heating the University buildings are arranged so as to be available for experimental work. The Corliss shop engine, the feed water pumps, and the Westinghouse air compressor are also used for purposes of instruction.

By special arrangements with the Fayetteville Water Company, students are allowed to run tests in this plant.

*Mechanical Hall*, contains the machine shop, wood shop, foundry, and forge shop. The shops will accommodate about seventy-five students at one time. Adjoining on the east is a boiler room.

The *machine shop* contains a Corliss engine, which runs the machinery in the whole building, a large iron planer, a shaper,

several lathes of different sizes and makes, a drill press, grinding machines, a milling machine, and a good supply of hand tools, benches, and materials. The *foundry* contains one Colleau cupola with a capacity of one and one-half tons of iron an hour, one brass furnace of one hundred and fifty pounds capacity, Buffalo pressure blower, and core oven. The *wood shop* contains one buzz planer, one large cylinder planer, a circular saw, a band saw, five smaller lathes, one 18-inch pattern maker's lathe, one double column shaper, and twenty-six benches, each equipped with a complete set of carpenter's tools. The *forge shop* contains eight Buffalo forges with down draft, which takes the smoke away through an underground pipe, thus avoiding the smoke and dirt of the ordinary blacksmith shop. It also contains a sheering and punching machine, eight anvils of different weights, and all the necessary blacksmith tools for the eight forges. The *boiler room* contains three fire-tube boilers, and three water-tube boilers, besides feed pumps, injectors, and measuring tanks.

The *Agricultural Hall*, the *Experiment Station Building*, and the *Dairy Building*, provide class rooms and laboratories for the College of Agriculture.

*Agricultural Chemistry Laboratory.* The laboratory of agricultural chemistry is situated in the Experiment Station Building. It is equipped with water, gas, tables, hoods, and all apparatus necessary for analytical problems in agriculture.

*Cotton Laboratory.* The cotton laboratory is situated in the Agricultural Building. It is equipped for technical study of cotton and cotton fiber in addition to the more practical study. A new improved gin, a common gin, a fibre-strength testing machine, a lantern for the study of length and character of fiber, microscopes, and hundreds of samples of cotton, representing all types and grades, are available for instruction and research.

*Entomological Laboratory.* The entomological laboratory is situated on the first floor of Agricultural Hall, occupying two rooms. It is well supplied with apparatus, such as microscopes, microtomes, paraffin baths, dissecting instruments, collecting nets, insect cabinets, and work-tables. The collection of insects is growing rapidly and serves as a valuable aid to the student of entomology.

*Field Crops Laboratory.* The laboratory of field crops is sit-



uated on the second floor of the Agricultural Building. A complete set of material is used in the study of types, strains, and quality, and the scoring and judging of staple and miscellaneous crops.

*Horticultural Laboratory.* For such work as must be carried on indoors, there is available for study and practice a fairly complete equipment of spraying machinery, garden tools, implements, and conveniences. There are rooms equipped for practical instruction in grafting, seed sowing, seed testing, and transplanting. The greenhouse offers facilities for some phases of class work, plant study, and practice. By using the orchard, garden, greenhouse, and campus as a laboratory, the student has opportunity to combine theory and technique in the most beneficial manner.

*Plant Pathology Laboratory.* The laboratory of plant pathology is situated in the Experiment Station Building. It is equipped with high power microscopes and such apparatus as is needed for the study of plant tissues and plant diseases.

*Soils Laboratory.* The soils laboratory is located on the first floor of the Agricultural Building. It is equipped with apparatus for special study of soils with the view of giving the student an insight into the formation, composition, and character of soils with reference to their bearing upon soil fertility, adaptability, and all methods of soil treatment affecting the productivity and conservation of soils.

*Bacteriology Laboratory.* The research laboratory of the department is located in the Experiment Station Building, where a part of the instruction in bacteriology is given. A well equipped laboratory in the Dairy Building is used for the major part of the student work.

*Dairy Laboratories.* The Dairy Building is equipped with a full line of modern dairy machinery. A modern creamery is operated throughout the year. Student laboratories are equipped for the study of sanitary principles in dairying and with separators, churns, vats, and equipment for standard home dairying.

*Animal Husbandry Laboratories.* Modern barns, including dairy barn, horse barn, hog barn, and poultry houses, are easily accessible for use in instruction. The livestock—horses, cattle, swine, and poultry—form the basis for instruction in animal industry.

## SUMMER SESSION

The seventh summer session of the University will open on **June 18** and close on **July 28, 1917**.

Courses in preparatory and college subjects will be offered by members of the regular corps of instructors. A model school will be conducted for practice in primary, grammar school, and high school methods.

Courses completed in the summer session will be credited towards a degree, provided that seven semester hours is the maximum that may be earned in any one session.

More detailed information in regard to the courses offered, matriculation, and registration may be had from the Summer Session Bulletin, which will be sent on request. Applications should be addressed to the Registrar, University of Arkansas, Fayetteville.

## ADMISSION

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### \*GENERAL REQUIREMENTS

Admission to any college of the University of Arkansas may be obtained either by certificate from an accredited high school or preparatory school or by examination. For unconditional entrance, the candidate must be a graduate of an accredited four-year high school or preparatory school and must have completed satisfactorily at least fourteen entrance units so chosen as to include those subjects prescribed by the college he desires to enter. Where a candidate is deficient in not more than two units, he may be allowed conditional entrance with the provision that all such deficiencies must be removed during the first year of his attendance at the University by offering high school courses or University courses of a preparatory nature in satisfaction of the deficiencies. Where a candidate enters with less than four full years of high school work he is conditioned on two units. Any such student who has completed fourteen or more units in acceptable courses in the high school may have this condition removed by making a passing grade on twelve hours of work in the first semester of the freshman year, otherwise he shall make up this condition in the manner described above. It should be understood that students who are admitted with conditions of more than one unit, as a rule, will find it necessary to attend an additional semester or year in order to meet the requirements for a degree.

### ADMISSION BY EXAMINATION

Entrance examinations are offered at the University during the opening week of school, September 17 and 18, inclusive. Students living at a distance from the University may secure special examinations to be conducted by the principal or the county examiner under conditions that will be indicated when the application is made. Requests for examinations must be mailed so as to reach the Registrar not later than September 1.

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\*Beginning with September 1, 1918, the basis for unconditional entrance will be graduation from an accredited four-year high school including not less than fifteen entrance units.

## ADMISSION BY CERTIFICATE

Students may enter the freshman class by certificate from any high school or preparatory school in the state accredited to the University in twelve or more units, or from any high school or preparatory school in another state similarly accredited to the state university of that state. An official statement of the student's record containing specific information as to the kind and extent of work done should be mailed to the Registrar of the University not later than September 1. Blank forms for this purpose will be furnished upon request. *Diplomas of graduation will not be accepted in lieu of certificates.*

Students who have been admitted to another college or university of equal standing will be allowed to enter without conditions upon presenting a certificate of honorable discharge and an official statement of the work accepted for entrance by the institution last attended, provided it appears that such work is substantially equivalent to the work required for entrance to the University of Arkansas.

## OUTLINE OF ENTRANCE REQUIREMENTS

## COLLEGE OF ARTS AND SCIENCES

The following units are prescribed for the course leading to the degree of *Bachelor of Arts*:

English, three units.

Algebra, one unit.

Geometry, one unit.

History, one unit.

French, German, Greek, Latin, or Spanish, three units, at least two of which must be in the same language. Where a student is not able to meet this requirement at entrance, he may be allowed to take as a part of his college course, in addition to the language requirement for a degree, one year-course in foreign language of not less than three hours for each entrance unit he is deficient.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects.

The following units are prescribed for the course leading to the degree of *Bachelor of Science in Chemistry*:

English, three units.

Algebra, one unit.

Geometry, one unit.

History, one unit.

Physics, one unit.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects.

The following units are prescribed for the special courses in music:

English, three units.

History, one unit.

French, German, Greek, Latin, or Spanish, three units, at least two of which must be in the same language. Where a student is not able to meet this requirement at entrance, he may be allowed to take as a part of his college course, in addition to the language requirement for a diploma, one year-course in foreign language of not less than three hours for each entrance unit he is deficient.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects. A maximum of three units in music may be used as part of the elective work.

### COLLEGE OF EDUCATION

The following units are prescribed for all courses:

English, three units.

History, one unit.

Science, one unit.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects.



*COLLEGE OF ENGINEERING*

The following units are prescribed for all four-year courses\*:

English, three units.

Algebra, one and one-half units.

Geometry, one unit.

History, one unit.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects.

*COLLEGE OF AGRICULTURE*

The following units are prescribed for the four-year courses:

English, three units.

Algebra, one and one-half units.

Geometry, one unit.

History, one unit.

Science, one unit.

Enough additional units to bring the total to fourteen, including not more than four units in vocational and business subjects.

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\*For a statement of the entrance requirements to the engineering trade courses, see page 131.

## DESCRIPTION OF SUBJECTS ACCEPTED FOR ADMISSION

The following statements indicate in a general way the preparation which is expected in the various subjects accepted for admission. The numbers in parentheses following each subject indicate the minimum and maximum number of units which may be offered in that subject. The term unit is understood to represent a high school or preparatory course continued through a school year of thirty-six weeks with five recitations of forty-five minutes each per week.

## ENGLISH (3-4)

In order to secure a definite plan of study and unity of method on the part of preparatory schools, the entrance requirement in English is outlined below somewhat in detail, following the recommendations of the National Conference on Uniform Entrance Requirements in English.

The study of English in school has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

*Grammar and Composition*—The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, sentences, and paragraphs should be thoroughly mastered, and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

*Literature*—The second object is sought by means of two lists of books, headed respectively *Reading* and *Study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of the authors whose works he reads and with their place in literary history.

*A. Reading*.—The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature by

giving him a first hand knowledge of some of the best specimens. He should read the books carefully, but his attention should not be so fixed upon details as to cause his missing the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I.

Group 1. *Classics in Translation*.—*The Old Testament*, comprising at least the chief narrative episodes in *Genesis*, *Exodus*, *Joshua*, *Judges*, *Samuel*, *Kings*, and *Daniel*, together with the books of *Ruth* and *Esther*; the *Odyssey* with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the *Æneid*. The *Odyssey*, *Iliad*, and *Æneid* should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

Group II. *Drama*.—Shakespeare, *Midsummer Night's Dream*, *Merchant of Venice*, *As You Like It*, *Twelfth Night*, *The Tempest*, *Romeo and Juliet*, *King John*, *Richard II*, *Richard III*, *Henry V*, *Coriolanus*, *Caesar*, *Macbeth*, *Hamlet*. (No one of the last three may be taken if chosen for study under B.)

Group III. *Prose Fiction*.—Malory, *Morte d'Arthur* (about 100 pages) Bunyan, *Pilgrim's Progress*, Part 1; Swift, *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe, *Robinson Crusoe*, Part I; Goldsmith, *The Vicar of Wakefield*; Frances Burney (*Madame d'Arblay*), *Evelina*; Scott, any one of the novels; Jane Austen, any one of the novels; Maria Edgeworth, *Castle Rackrent*, or *The Absentee*; Dickens, any one of the novels; Thackeray, any one of the novels; George Eliot, any one of the novels; Mrs. Gaskell, *Cranford*; Kingsley, *Westward Ho!* or *Hereward, the Wake*; Reade, *The Cloister and the Hearth*; Blackmore, *Lorna Doone*; Hughes, *Tom Brown's School Days*; Stevenson, any one of the novels which are out of copyright; Cooper, any one of the novels; Poe *Selected Tales*; Hawthorne, any one of the novels which are out of copyright; a collection of *Short Stories* by various standard writers.

Group IV. *Essays and Biographies*.—Addison and Steele, *The Sir Roger de Coverley Papers*, or selections from *The Tatler* and *The Spectator* (about 200 pages); Boswell, selections from the *Life of Johnson*, (about 200 pages); Franklin, *Autobiography*; Irving, selections from the *Sketch Book* (about 200 pages), or the *Life of Goldsmith*; Southey, *Life of Nelson*; Lamb, selections from the *Essays of Elia* (about 100 pages); Lockhart, selections from the *Life of Scott* (about 200 pages); Thackeray, lectures on Swift, Addison and Steele in the *English Humorists*; Macaulay, one of the following essays; Lord Clive, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederic the Great*, *Madame d'Arblay*; Trevelyan, selections from the *Life of Macaulay* (about 200 pages); Ruskin, *Sesame and Lillies*, or *Selections* (about 150 pages); Dana, *Two Years before the Mast*; Lincoln, *Selections*, including at least the two inaugurals, the speeches in Independence Hall and at Gettysburg, the last public address,

and the letter to Horace Greeley, together with a brief memoir or estimate of Lincoln; Parkman, *The Oregon Trail*; Thoreau, *Walden*; Lowell, *Selected Essays* (about 150 pages); Holmes, *The Autocrat of the Breakfast Table*; Stevenson, *An Inland Voyage and Travels with a Donkey*; Huxley, *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*; a collection of *Essays* by Bacon, Lamb, De Quincey, Hazlitt, Emerson, and later writers; a collection of *Letters* by various standard writers.

Group V. *Poetry*—Palgrave, *Golden Treasury (First Series)*, Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave, *Golden Treasury (First Series)*, Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith, *The Traveller* and *The Deserted Village*; Pope, *The Rape of the Lock*; a collection of English and Scottish *Ballads*, as for example, *Robin Hood*, *The Battle of Otterburn*, *King Estmere*, *Young Beichan*, *Beowulf* and *Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge, *The Ancient Mariner*, *Christabel*, and *Kubla Khan*; Byron, *Childe Harold*, Canto III, or Canto IV, and *The Prisoner of Chillon*; Scott, *The Lady of the Lake*, or *Marmion*; Macaulay, *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Ivy*; Tennyson, *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine* and *The Passing of Arthur*; Browning, *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Herz Riel*, *Phedippides*, *My Last Duchess*, *Up at a Villa—Down in the City*, *The Italian in England*, *The Patriot*, "De Gustibus—," *The Pied Piper*, *Instant Tyrannus*; Arnold, *Sohrab and Rustum* and *The Forsaken Merman*, selections from American poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. *Study and Practice*.—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

Group I. *Drama*—Shakespeare, *Julius Caesar*; *Macbeth*; *Hamlet*.

Group II. *Poetry*—Milton, *L'Allegro*, *Il Penseroso*, and either *Comus* or *Lycidas*; Tennyson, *The Coming of Arthur*, *The Holy Grail* and *The Passing of Arthur*; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury (First Series)*.

Group III. *Oratory*—Burke, *Speech on Conciliation with America*; Macaulay, *Speeches on Copyright* and Lincoln, *Speech at Cooper Union*; Washington, *Farewell Address* and Webster, *First Bunker Hill Oration*.

Group IV. *Essays*—Carlyle, *Essay on Burns*, with a selection from Burns' *Poems*; Macaulay, *Life of Johnson*; Emerson, *Essay on Manners*.

## MATHEMATICS.

*Elementary Algebra* (1).—Positive and negative numbers; addition;

subtraction, multiplication, division; factoring, highest common divisor and lowest common multiple by factoring; fractions; equations of the first degree in one, two and three unknowns, with numerous problems involving such equations; involution (omitting the binomial theorem); evolution (omitting cube root); elementary manipulation of surds; irrational equations that lead to equations of the first degree; pure quadratic equations; affected quadratic equations by the method of completing the square and by factoring, with problems involving such equations. Hawkes-Luby-Touton, *First Course in Algebra*, or its equivalent, will be accepted as a satisfactory text.

*Higher Algebra* ( $\frac{1}{2}$ ).—A review of the elementary algebra with more difficult problems and with some demonstrational work; theory of quadratics, simultaneous quadratics, inequalities, ratio and proportion, variation, progressions (arithmetical, geometrical, and harmonical), binomial theorem, and logarithms. Hawkes-Luby-Touton, *Second Course in Algebra*, will be accepted as a satisfactory text.

*Plane Geometry* (1).—Any of the standard texts on this subject will furnish the necessary preparation. The exercises requiring solutions and demonstrations should be emphasized.

*Solid Geometry* ( $\frac{1}{2}$ ).—Any of the standard texts on this subject will furnish the necessary preparation. The exercises requiring solutions and demonstrations should be emphasized.

*Plane Trigonometry* ( $\frac{1}{2}$ ).—Any of the standard texts on this subject will furnish the necessary preparation. The exercises requiring solutions and demonstrations should be emphasized.

## HISTORY AND SOCIAL SCIENCES

### HISTORY.

*Ancient History* ( $\frac{1}{2}$ -1).—The completion of a standard text-book, with emphasis on the history of Greece and Rome and some attention to geography, will satisfy the requirements for one unit.

*Medieval and Modern History* ( $\frac{1}{2}$ -1).—The completion of a standard text covering the history of Europe in medieval and modern times, some parallel reading, and a knowledge of the geography involved, will satisfy the requirements for one unit.

*English History* ( $\frac{1}{2}$ -1).—An advanced high school text should be used. Constitutional points should receive attention, and easily accessible documents should receive careful study.

*American History* ( $\frac{1}{2}$ -1).—An advanced high school text should be used and the subject should be taken preferably in the senior year. Current newspapers and magazines should be assigned as collateral reading.

### SOCIAL SCIENCES.

*Civil Government* ( $\frac{1}{2}$ ).—This should be a study of our government, national, state, and local, as it is organized and actually operated today. The instruction should aim to impart information essential to intelligent,



active citizenship, such as the division of the government into departments, their organization and functions; the methods of nominating, electing, and appointing men to office; of framing and amending constitutions, city charters, and statutes; of drawing grand and petit juries and the duty of the citizen to serve on them; the distinction between common law, state law, and constitutional law, between equity, civil, and criminal cases.

*Elementary Economics* ( $\frac{1}{2}$ ).—In the study of economics it is desirable to avoid two extremes, abstract theory on the one hand, and controversial questions, such as the tariff, trusts, and trade unions, on the other hand. Emphasis should be placed on historical and descriptive matter, especially relating to the economic development of England and the United States. Some good elementary text-book should be mastered and a reasonable amount of collateral reading required.

*Commercial Geography* ( $\frac{1}{2}$ ).—This describes and seeks to explain the commerce of today. The work should cover the ways in which commerce depends on nature and on man, the development of means of transportation and communication, and a detailed study of the several commercial regions of the world with reference to resources, industries, transportation facilities, and commerce. It should be based on a text-book supplemented by map work and assigned readings.

## LANGUAGES.

### LATIN.

*Latin Grammar* (1).—This should include a thorough grounding in some standard elementary Latin Grammar, such as Bennett, Hale-Buck, or Allen and Greenough, revised edition. Proficiency is particularly desired in the following subjects: the analysis of the verb forms, the rules of syntax, and the principal parts of the irregular verbs.

*Caesar* ( $\frac{1}{2}$ -1).—First four books or selections from the seven books equivalent to four. The student is expected to be familiar with the life of Caesar and an account of his wars.

*Cicero* ( $\frac{1}{2}$ -1).—Any four orations from the following list: *Against Catiline*, *Poet Archias*, *Ligarius*, *Marcellus*, *Manillian Law* (to count as two orations), the fourteenth *Philippic*. The student should also be familiar with the life of Cicero.

*Vergil* ( $\frac{1}{2}$ -1).—Six books of the *Æneid*. The student should be familiar with the life of Vergil and an account of his times and writings. A correct rhythmical reading of the text is to be encouraged.

### GREEK.

*Greek Grammar* (1).—This should include a thorough grounding in some standard elementary Greek Grammar, such as White's *First Greek Book*, with translation from Xenophon's *Anabasis*, Book I.

*Xenophon's Anabasis* (1-2).—Four books, accompanied by work in grammar and composition.

## GERMAN.

*German Grammar* (1).—The student should know the rudiments of grammar and be able to read easy prose at sight and to translate simple English sentences into German.

*Advanced German* (1-3).—The student should be able to read modern German prose and poetry at sight and to translate easy English narrative into German. A considerable amount of reading from such authors as Riehl, Heyse, Freytag, Baumbach, Heine, Goethe, and Schiller will be expected.

## FRENCH.

*French Grammar* (1).—The student should be familiar with elementary French grammar, with special attention to the irregular verbs. He should be able to read easy prose at sight and to translate simple English sentences into French.

*Advanced French* (1-3).—The student should be able to read standard French prose and poetry at sight and to translate easy English narrative into French. A considerable amount of reading from such authors as Daudet, Loti, Sandeau, Dumas, Augier, Labiche and Martin, and Hugo will be expected.

## SPANISH.

*Spanish Grammar* (1).—The student should be familiar with elementary Spanish grammar and should be able to read easy prose and to translate simple English sentences into Spanish.

*Advanced Spanish* (1-3).—The student should be able to read standard Spanish prose and poetry at sight and to translate easy English narrative into Spanish.

## NATURAL SCIENCES.

All of the courses in natural science should include at least two periods of laboratory work per week.

*General Science* ( $\frac{3}{4}$ -1).—This should include a study of the earth and the sun in their relations to man, based on some such text as Snyder's *First Year Science*. All branches of elementary science should be included.

*Physiology* ( $\frac{1}{2}$ -1).—This should include a thorough study of some standard high school text such as Hough and Lee or Martin, with notebooks, drawings, individual laboratory instruction, and demonstration work.

*Physical Geography* ( $\frac{1}{2}$ -1).—A thorough study of any standard high school text supplemented by laboratory exercises will satisfy the requirements.

*Physics* ( $\frac{3}{4}$ -1).—This should include a study of at least four of the following topics: mechanics of solids, liquids, and gases, sound, heat, light, electricity, and magnetism, based on some standard high school text and supplemented by laboratory exercises.

*Chemistry* ( $\frac{1}{2}$ -1).—The full year's work should include a study of both the metals and non-metals with laboratory experiments to illustrate the common chemical laws and the more simple chemical reactions.

*Biology* ( $\frac{1}{2}$ -1).—A thorough study of any standard high school text supplemented by laboratory exercises will satisfy this requirement.

*Botany* ( $\frac{1}{2}$ -1).—The course should follow as closely as possible the nature and work of plants during the changing seasons of the year. The major portion of the work should be with living plants, naming the common plants of the neighborhood, both cultivated and native, and studying plant parts from seed to maturity.

*Zoology* ( $\frac{1}{2}$ -1).—Animals should be studied as living units in their relation to one another and their environments. This study should include developmental stages as well as the adult stage. The aim of the teacher should be to foster a love for animate nature and to develop accuracy in observation and description.

### VOCATIONAL SUBJECTS.

Not more than four units are allowed in the following vocational subjects, including business subjects, manual training, domestic art and science, and agriculture.

#### BUSINESS SUBJECTS.

*Business Law* ( $\frac{1}{2}$ ).—Text-book supplemented by study of a few typical cases, and practice in drawing up ordinary legal papers, such as bills, notes, checks, etc.

*Elementary Bookkeeping* (1).—A text-book should be employed with exercises so arranged that no two pupils will do exactly the same work, and no credit should be allowed unless the work is done neatly, accurately, and at a satisfactory rate of speed. It is suggested that double periods be provided, and all work be done in class under the eye of the instructor. The set used should include the journal, cash book, sales book, ledger, check book, bank pass book, and trial balance book.

*Advanced Bookkeeping and Business Practice* (1).—Thorough drill on standard business forms, such as bills, receipts, checks, and notes, also on the use and meaning of business symbols and abbreviations. The student should become acquainted with the bill and invoice book, and loose leaf and voucher systems of bookkeeping. Each student should carry on a business of his own, first as an individual, then as a partnership, and finally as a corporation. Credit on this course should mean that the student lacks only age and actual business experience to become a competent bookkeeper.

*Stenography and Typewriting* (1).—This work is expected to occupy not less than two periods daily for two years. No credit should be given for either shorthand or typewriting if taken alone. Nothing but the touch method should be used in typewriting. The essentials are, first, accuracy and speed in taking dictation and transcribing notes; secondly, correct spelling, capitalization, punctuation, and paragraphing. The minimum speed at the end of the first year should be 75 words per minute in dicta-

tion and 25 words per minute on the machine; and at the end of the second year, 100 words per minute in dictation, and 35 words per minute in transcribing notes. Thorough training should also be given in care of the machine, in modern methods of manifolding, and in filing papers.

#### HOME ECONOMICS.

*Domestic Science* ( $\frac{1}{2}$ -2).—This should include a study of the elements of domestic science, cooking, foods, nutrition, and dietetics, with laboratory exercises.

*Domestic Art* ( $\frac{1}{2}$ -2).—This should include a study of the elements of domestic art, sewing, textiles, and home furnishing and decoration.

#### MANUAL TRAINING.

Owing to the fact that drawing and shop work do not require outside preparation, only half units are allowed; that is, one full credit for two years of work of one period daily, or for one year of work two periods daily.

*Shop Work* ( $\frac{1}{2}$ -2).—A maximum of two units will be allowed for work in joinery, wood-turning, pattern-making, cabinet-making, forge shop and machine shop.

*Mechanical Drawing* ( $\frac{1}{2}$ -2).—A maximum of two units will be allowed for work in mechanical and machine drawing.

#### AGRICULTURE.

*Agriculture* ( $\frac{1}{2}$ -4).—One year in a standard high school based on text-book, laboratory, and field work will be allowed one unit. A maximum of four units will be allowed for work done at any of the district agricultural schools.

#### NORMAL TRAINING SUBJECTS.

*Psychology* ( $\frac{1}{2}$ ).—One-half unit will be allowed for a course based on some standard text, such as Colvin and Bagley, or Titchner.

*Pedagogy* ( $\frac{1}{2}$ ).—One-half unit will be allowed for a course based on some standard text, such as Seeley's *School Management* or Strayer's *Brief Course in the Teaching Process*.

#### FINE ARTS.

*Music* (1-3).—A maximum of three units may be allowed in vocal and instrumental music to those entering the special course in music. One unit is equivalent to two lessons of thirty minutes each per week, with two hours of practice daily for one year.

*Art and Drawing* ( $\frac{1}{2}$ -2).—One unit will be allowed for five hours of work per week for one year.

## LIST OF ACCREDITED HIGH SCHOOLS\*

## CLASS "A"

*Four-year high schools accredited in fourteen or more units*

Anunciation Acad.	Fordyce	Mountain Home
Argenta	Foreman	Nashville
Arkadelphia	Forrest City	Newport
Ashdown	Fort Smith	Osceola
Atkins	Gentry	Paragould
Augusta	Gravette	Piggott
Batesville	Greenwood	Pine Bluff
Benton	Hamburg	Pocahontas
Bentonville	Harrison	Portland
Blytheville	Helena	Prescott
Booneville	Hope	Rector
Brinkley	Hot Springs	Rogers
Camden	Imboden	Russellville
Carlisle	Jonesboro	Searcy
Clarendon	Junction City	Siloam Springs
Clarksville	Lake Village	Springdale
Conway	Leslie	Stamps
Corning	Little Rock	Stuttgart
Cotter	Lonoke	Texarkana
Cotton Plant	Magnolia	Thornton
Crossett	Malvern	Tillar
Dardanelle	Mammoth Springs	Van Buren
Dermott	Marianna	Waldron
DeQueen	McCrory	Walnut Ridge
El Dorado	McGehee	Warren
El Paso	Mena	West Helena
England	Monticello	Wynne
Eureka Springs	Moro	Warren Training
Fayetteville	Morrilton	School

*Accredited for entrance to the College of Agriculture.*

First District Agricultural High School, Jonesboro.

Second District Agricultural High School, Russellville.

Third District Agricultural High School, Magnolia.

Fourth District Agricultural High School, Monticello.

\*Corrected to April 1, 1917.



## CLASS "B"

*Three-year high schools accredited in twelve or more units  
and four-year high schools accredited in twelve to fourteen units*

Bald Knob	Formosa	Paris
Bauxite	Green Forest	Parkdale
Belleville	Gurdon	Pea Ridge
Berryville	Hardy	Roe
Branch	Hartford	Salem
Cabot	Horatio	Scotts
Charleston	Lockesburg	Stephens
Clinton	Mansfield	Sutton
Crawfordsville	Murfreesboro	Waldo
Damascus	Newark	
DeVall's Bluff	Okolona	

## ADMISSION TO ADVANCED STANDING

Advanced standing may be secured either by examination or by transfer of credits from another institution. In order to obtain such standing, application must be made to the Examiner within the first six weeks during which the applicant is in attendance at the University. Studies completed in another college or university will be accepted for advanced credit only when certified to by the proper officials of that institution. Certificates for this purpose should include a complete record of the courses pursued with the number of weeks and hours per week spent upon each subject.

Graduates of accredited four-year high schools who have completed more than the fourteen units required for entrance, may, with the advice and consent of the head of the department concerned, be granted conditional college credit, in no case to exceed twelve\* semester hours, for courses pursued in the senior year in high school, provided that such courses are substantially equivalent to the college courses in which credit is sought. Such credit does not become a permanent part of the applicant's record until he has successfully completed the first semester of an advanced course in the same subject, assigned to him by the head of

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\*Beginning with September 1, 1918, the maximum amount of conditional college credit which will be allowed for high school courses will be reduced to six semester hours.

the department concerned. Should the applicant fail to pursue such advanced course at his earliest opportunity, or should he fail to make a passing grade for the first semester in which he does pursue such advanced course, his conditional credit is cancelled.

#### ADMISSION AS A SPECIAL STUDENT

A person of mature age who is not a candidate for a degree may be admitted as a special student under terms prescribed by the individual colleges. A special student is not required to meet the regular entrance requirements but must satisfy the dean of the college in which he wishes to enroll that he is capable of carrying college work. In addition, each application must have the endorsement of the instructor whose work the applicant desires to take.

*College of Arts and Sciences.* Applicants for enrollment as special students must be at least twenty years of age, except that in the Department of Fine Arts applicants may be admitted at the age of eighteen.

*College of Education.* Applicants for enrollment as special students must be at least twenty years of age.

*College of Engineering.* Applicants for enrollment as special students must be at least eighteen years of age, except that in the trade courses applicants may be admitted at the age of sixteen.

*College of Agriculture.* Applicants for enrollment as special students must be at least eighteen years of age, except that in the short courses applicants may be admitted at the age of sixteen. All applicants must have at least two years of practical farm experience.

Special students are subject to the same regulations as other undergraduate students. They may become candidates for a degree by complying with the necessary regulations. No person will be permitted to register as a special student for more than one year without the permission of the faculty of the college concerned.

## FEES AND EXPENSES

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### BENEFICIARY APPOINTMENTS.

The state law provides that one thousand students residing within the state may receive beneficiary appointments entitling them to free tuition. These appointments are apportioned to the various counties according to population, and are obtained from the county judge. Those who are unable to obtain appointments from the county judge may receive them from the President of the University until the number of one thousand is reached.

### FEES

All fees must be paid in advance to the Auditor at the beginning of each semester. No student will be allowed to attend classes until his fees are paid.

Matriculation fee (paid by all students, seven dollars at the beginning of each semester)-----	\$14.00
Students Activities fee (paid by all students, three dollars at the beginning of each semester)-----	6.00
Tuition fee (paid by all non-resident students and by others who do not hold beneficiary appointments, five dollars at the beginning of each semester)-----	10.00
Library fee (paid yearly by all students)-----	1.00
Dormitory fee (paid yearly by all students living in the dormitories) -----	5.00
Diploma fee (payable at graduation)-----	5.00
Certificate fee (payable at graduation)-----	2.50

A breakage deposit is required of all students pursuing laboratory courses, to cover the material and apparatus used and any breakage or damage. The balance of the deposit, after making the necessary deductions, is refunded to the student at the end of the year.

## SPECIAL FEES IN THE DEPARTMENT OF FINE ARTS

Piano with Director, per semester .....	\$27.50
Piano with Director, per month .....	7.50
Piano with Assistant, per semester .....	22.50
Piano with Assistant, per month .....	6.00
Voice, Violin, per semester.....	22.50
Voice, Violin, per month.....	6.00
Study of Opera Libretto, per semester.....	3.00
Harmony, in class, per semester.....	5.00
History of Music, in class, per semester.....	5.00
Counterpoint, per semester.....	5.00
Piano practice, one hour daily, per semester.....	2.50
Each additional hour daily, per semester.....	1.25
Diploma fee, for completion of the special course in music	5.00
Certificate fee, for completion of the special course in music .....	2.50

A studio fee of two dollars will be charged in all courses in Art except course 5.

## EXPENSES

The following estimates, based upon data secured from students recently in attendance, will give some idea of the cost of attending the University for a year:

Clothes, including uniform.....	\$ 20.00	\$ 40.00	\$ 65.00
Board, laundry, heat and light.....	135.00	180.00	225.00
Books, instruments, and other school supplies.....	10.00	15.00	20.00
Other expenses .....	25.00	30.00	35.00
Matriculation and student activities fees	20.00	20.00	20.00
	<hr/>	<hr/>	<hr/>
	\$210.00	\$285.00	\$365.00

## BOARD AND ROOM

The men's dormitories provide accommodation for about two hundred fifty students. For rooms, unfurnished, a charge of five dollars per year for each occupant is made. Board, heat, light, and laundry are provided at cost, usually about eighteen dollars per month.

The women's dormitory provides accommodation for about one hundred students. For rooms, furnished except for linen and towels, a charge of five dollars for each occupant is made.

Reservations for rooms in any of the dormitories should be sent to the Auditor of the University not later than September 1. No reservation will be made unless the dormitory fee of five dollars has been paid.

Lodging may also be secured in private homes near the University at reasonable rates. Boarding places, other than the dormitories, must be selected from a list approved by the University authorities, and may not be changed except by consent of the Dean of Women, in the case of women, or of the President, in the case of men.



## ORGANIZATIONS AND ACTIVITIES

### CONVOCATION

Convocation exercises for faculty and students are held in the auditorium on the first floor of University Hall at 10 o'clock on Thursday of each week. The programs consist of addresses and lectures by men in public life, discussions of University affairs and problems, and musical numbers. Attendance at convocation exercises is required of all freshmen and sophomores.

### CHRISTIAN ASSOCIATIONS

The Christian Associations stand for spiritual, mental, and physical development. Their mission is to befriend and help those who need friends and help, to apply Christian principles to college life, to train for aggressive religious work—in short, to prepare men and women to go out from the University to become religious, as well as business, social, and intellectual leaders.

The Young Men's Christian Association holds religious meetings for men on Sunday afternoons and Wednesday evenings. The Young Women's Christian Association holds religious meetings for women on Sundays, Wednesdays, and Fridays. A series of special evangelistic meetings is held once each year. Courses in systematic Bible study and in modern missions are offered and are open to all students.

A most helpful feature of the work of the associations is in their interest in new students at the opening of the college year. Students are assisted in securing desirable rooms and boarding places. A bureau of information is conducted for the benefit of all students who need assistance. Each association employs a general secretary who gives full time to the work.

Each year the associations issue a Student's Handbook, which gives information about Fayetteville, the University, and the various college organizations and activities.

The University authorities are in hearty sympathy with the organizations and do everything in their power to aid in their work.

## INTERCOLLEGIATE DEBATE

The University holds annual debates with other collegiate institutions, each school being represented by one team on the affirmative side of the question and one team on the negative. The debates are held usually during the second week of April. Each member of the intercollegiate debating teams is awarded an "A" to be worn on a fob or a pin, in recognition of his services, and is allowed three hours credit towards a degree (see page 81, English 25b).

## ATHLETICS

In intercollegiate athletics, the University is represented by teams in football, baseball, wrestling, and tennis. In intramural athletics, a system of inter-class, inter-college, and tournament contests has been developed for the purpose of reaching the average student who finds it impossible to participate in intercollegiate athletics. In this way all students are enabled to get some form of outdoor recreation daily.

The University is a member of the Southwest Intercollegiate Athletic Conference, and as such is governed by the rules of the Conference in all intercollegiate athletic contests. Some of the more important rules of eligibility are:

1. No student shall participate in any intercollegiate contest until one year after the date of his registration in the institution he represents.
2. No person who is not an amateur shall be allowed to represent any member of the Conference in any athletic contest.
3. A student transferring from one institution of collegiate rank to another shall not be eligible to compete in intercollegiate athletics until he has been a student for one year in the institution to which he transfers.
4. No person shall be permitted to participate in intercollegiate athletics who is not a student in good and regular standing, who is not taking at least the minimum amount of work prescribed in the regular course of study in his institution, and who is not making a passing grade in at least two-thirds of the normal amount of work prescribed.
5. No student shall be eligible to compete in intercollegiate

athletics, who, during his last semester in attendance, failed to pass two-thirds of the normal work for his course.

All athletic activities are under the immediate supervision of the Director of Athletics.

The Senate Committee on Athletics is charged with the enforcement of the rules of eligibility and with supervision of the financial management of athletics.

#### ORGANIZATIONS AUXILIARY TO COURSES OF STUDY

The *American Institute of Electrical Engineers, University of Arkansas Branch*, meets regularly on the alternate Tuesdays throughout the school year, for the presentation of original papers and for discussion of the regular Institute transactions of which advance copies are received. All students interested in electrical engineering are eligible to membership.

The *American Society of Mechanical Engineers, University of Arkansas Student Section*, meets regularly on the second and fourth Mondays of the month, during the school year. The meetings are devoted to the presentation of original papers and discussion of papers selected from those regularly presented before the American Society of Mechanical Engineers, of which advance copies are received. Occasionally a lecture by some prominent engineer takes the place of the regular program.

The *Agricultural Society* meets weekly to discuss topics of practical and theoretical interest to students of agriculture and current topics of general interest. Occasional lectures by experts in agriculture take the place of the regular programs.

#### LITERARY SOCIETIES

The *Garland, Lee, and Periclean* societies for men meet Saturday evenings to render programs consisting of prepared and extemporaneous debates, speeches, and readings. The *Sapphic* society for women meets on Thursday afternoons.

#### DRAMATIC CLUB

The *Black Friars* meets on alternate Tuesdays for the study of plays classic and current, and for general information in matters pertaining to the drama and to the theatre. Two plays

are produced each year. Membership in the society is limited to twenty-five.

#### GLEE CLUB

The *Glee Club* is open to all men students. Membership is determined by competition.

#### HONOR SOCIETIES

*Tau Kappa Alpha* is restricted to intercollegiate orators and debaters. The aim of the organization is to encourage and reward meritorious effort in public speaking.

*Tau Beta Pi* is restricted to engineering students. The object of the organization is to encourage scholarship and to foster liberal culture among engineering students. Eligibility to membership is based upon high scholarship and character.

*Skull and Torch* is restricted to juniors and seniors in the College of Arts and Sciences and the College of Education who are candidates for a degree. Eligibility to membership is based upon high scholarship, participation in student activities, and personal character.

*Alpha Zeta* is restricted to upperclassmen in the College of Agriculture. Eligibility to membership is based upon high scholarship and character.

*Eta Theta Epsilon* is restricted to upperclassmen. The purpose of the organization is to promote the interests of college journalism by making membership conditional upon faithful and efficient service on college publications.

*Scabbard and Blade* is restricted to cadet officers. Eligibility to membership is based upon efficiency, personal character and influence, and interest in military affairs.

#### STUDENT PUBLICATIONS

*The University Weekly* is devoted to current events and matters of interest to the University as a whole.

*The Arkansan* is a literary magazine, published monthly during the school year.

*The Razorback* is published annually by the junior class. It contains pictures of individuals, classes, and organizations and serves as a history of the school year.

## HONORS, SCHOLARSHIPS, AND PRIZES

### SCHOLARSHIPS

*Women's Club Scholarships.* The Federation of Women's Clubs of Arkansas offers two annual scholarships, one for men and one for women. Appointment to the scholarships is determined by competitive examinations held in June of each year by the county examiner or county superintendent under the direction of University authorities. Candidates must stand examination in fourteen units of high school work including those units prescribed for entrance to the University. Persons who wish to take the examinations should notify the President of the University before May 1st so that examinations in the desired subjects may be forwarded to the examiner or superintendent in good season. The scholarships pay one hundred forty and one hundred forty-five dollars, respectively.

*Daughters of the Confederacy Scholarship.* The Daughters of the Confederacy of Arkansas have provided one scholarship.

*Elks' Scholarship.* The Benevolent and Protective Order of Elks have provided a scholarship to be awarded by the Federation of Women's Clubs. Correspondence should be addressed to Mrs. Edwin Bevens, Helena, Arkansas.

*University Scholarships.* The Board of Trustees has provided one scholarship annually to be awarded to the honor graduate of each fully accredited public high school within the state. In case the high school does not select any member of the graduating class as the honor graduate, the scholarship shall be awarded to the student who has made the highest average in his studies for the entire high school courses. The scholarship grants exemption from the payment of matriculation, student activities, and library fees.

### HONORS

By a system of departmental, class, and graduation honors, the University gives official recognition of attainments in scholarship.

*Departmental Honors.* To be eligible for departmental hon-



ors a student must have passed in at least eighteen credit hours in the department with a grade of "A." From the students who are eligible for honors in a department, the teaching force of the department shall select the first and second. As a basis for this selection, all of the work done in the department shall be considered and general class standing if necessary.

*Class Honors.* Any student who passes in at least fifteen hours of collegiate work and receives a grade of "A" in not less than twelve hours and ranks not less than "C" in any course shall receive class honors.

*Honors at Graduation.* Any student who makes class honors in both his junior and senior years shall be termed an honor graduate.

All honors shall be published at commencement, and in the catalog for the following year.

All students who are honor graduates shall have the fact noted in their diplomas.

#### PRIZES

*William Jennings Bryan Prize.* Hon. William Jennings Bryan has given to the University the sum of two hundred fifty dollars, the interest on which is offered annually as a prize for the best essay on some topic relating to the problems of government. The contest is open to juniors and seniors. Further information may be obtained from the professor of economics and sociology.

*Troy W. and Jessie Lewis Economic Essay Prize.* Mr. Troy W. Lewis, of Little Rock, offers annually a prize of ten dollars to the member of the senior class who writes and submits the best essay on some economic subject.

*Chi Omega Prize.* The Chi Omega sorority offers at each institution at which it has a chapter an annual prize of fifteen dollars for the best essay on some topic connected with the study of sociology. The contest is open to all women of the University who are pursuing courses in economics or sociology.

*Brough Debating Medal.* Governor Charles Hillman Brough, formerly head of the Department of Economics and Sociology at the University, offers a medal of the value of twenty dollars

or a cash prize of twenty dollars, for excellence in debate, to be contested for by two representatives of each of the literary societies. Under the conditions of the award, two debates must be held during the year, one formal, in which the speeches are prepared, valued at sixty per cent, and one informal, in which the speeches are extemporaneous, valued at forty per cent. These debates are designed to train students in the art of forensic speaking and to promote a friendly rivalry between the literary societies.

*Arkansas Engineering Society Prize.* The Arkansas Engineering Society offers a prize not to exceed twenty-five dollars for the best thesis submitted by a member of the senior class in the College of Engineering.

## RULES AND REGULATIONS

Each student at the time of registration is given a copy of the rules and regulations for undergraduate students for the observance of which he will be held strictly responsible.

### GOVERNMENT

The government of the University is vested primarily in a Board of Trustees, consisting of the Governor of the State and the State Superintendent of Public Instruction, as ex-officio members, and seven other members, appointed by the Governor for a term of six years.

The administration of the University is vested in the President, the University Council, the University Senate, and the faculties and deans of the various colleges.

The President is the administrative head of the University. The University Council is composed of the President, the deans of the several colleges, and four other members, appointed by the President. The Council is the central executive body of the University and is advisory to the President.

The University Senate is composed of the President, the Registrar, the deans, and all heads of departments and professors. The Senate is the general legislative body of the University.

The faculty of each college within the University has jurisdiction, subject to higher University authority, over all matters that concern exclusively that college.

The dean of each college is responsible for the carrying out of all University regulations within his college. The Dean of Women acts as an adviser to women undergraduate students and is charged with the general care and conduct of these students.

### DISCIPLINE AND ATTENDANCE

Students are required to be diligent in the pursuit of their studies and regular in their attendance at class. Those who fail to meet these requirements will be requested to withdraw.

Students are required to attend all meetings and examina-

tions of courses for which they are registered. For each sixteen credit hour absences, the student shall be required to complete one extra semester hour for graduation. In computing such absences there shall not be taken into consideration absences necessarily incurred when a student is legally away from the University either on official University business or as member of an organization recognized by the University.

An absence on the first day of a semester or on the day preceding or on the day following any holiday shall count as two.

A student who is absent from an examination must explain his absence to the Examiner within a time set by the Examiner. Failing to do so he will be given a grade of "F" in the course.

#### REGISTRATION

Students are required to matriculate and classify during the first three days of the session. Those who enter a course late will be held accountable for all meetings of the course previous to their entrance.

#### STUDENTS' WORK

A student in his first semester at the University, unless he is registered in a class higher than the freshman, shall not be permitted to carry a greater number of hours than the normal number required in his course, provided that the dean of the college concerned may at his discretion allow such a student to carry one hour more than the maximum prescribed. Students who have done work of an exceptionally high grade in the high school may be exempted from the operation of this rule by permission of the dean of the college concerned.

A freshman student who enters conditionally shall not be allowed to carry more than the normal number of hours required in his course. In computing this there shall be reckoned the work that he is doing to make up entrance conditions.

A student who has failed in any subject (not including physical education and military art) in any semester shall not be allowed the next following semester to carry more than the normal number of hours required in his course.

The dean of the college in which a student is enrolled may at

his discretion limit the number of hours that student shall be allowed to carry.

A student may enroll in two classes where a conflict occurs only by permission of the dean of the college and of the heads of the department concerned. In no such case shall a student be allowed to lose more than one-third of the time devoted to recitation in either class. The student shall be charged with all absences incurred through such conflict.

#### GRADING AND EXAMINATIONS

The following grading system went into effect September 1, 1916: A, B, C, D (passing grades), E (conditional failure), F (absolute failure). A student receiving a grade of "E" may remove it by an examination. A student receiving a grade of "F" shall not receive credit for the course except by repeating it in class. A student receiving a grade of "D" in any subject shall have an opportunity to raise this grade by standing an examination. Should he elect to take such examination the grade made upon the examination shall become a part of his permanent record in place of the first grade made.

Examinations to raise the grade "D" or to remove the grade "E" shall be given on Monday and Tuesday of registration week in the student's next succeeding college year. In the case of seniors applying for graduation, a re-examination either to remove the grade "E" or to raise the grade "D" may be given in the same year prior to commencement at a time set by the Examiner.

Seniors applying for graduation and carrying the requisite work to entitle them to graduation, may, upon the recommendation of the instructors concerned, be excused from final examinations in each case in which their grade is as high as "B." Notices of exemption are sent by the Examiner near the end of the semester.

If for any reason a student drops a course after the eighth week of the semester and if the student's work during the time that he attended the course was below the grade of "D", there shall be entered on his record a grade of "F" in that course; if above the grade "D", he shall be marked "Excused" in that course.



## REQUIREMENTS FOR GRADUATION

No student shall be graduated from any division of the University who has a failing grade on his record which has not been satisfactorily repeated in class, removed by examination, or excused by the faculty of the college concerned.

No student shall be allowed to graduate from any division of the University if more than twenty-five per cent of his work is of the "D" grade.

No courses in which tuition is paid by the student to the instructor shall be given credit towards a degree.

In addition to completing the prescribed course of study, candidates for a degree are required to do at least the work of the senior year in residence.

## COLLEGE OF ARTS AND SCIENCES

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The object of the courses offered in the College of Arts and Sciences is to cover the broad field of general university study, including ancient and modern languages and literature, history and the social sciences, mathematics, the natural sciences, and the fine arts. It aims to afford the student an opportunity to gain a broad, cultural education, as well as to equip himself for further study in more technical fields.

### ADMISSION

For a detailed statement of the entrance requirements and a description of the subjects accepted for entrance see page 29.

### COURSES OF STUDY

The College of Arts and Sciences offers four-year courses leading to the degrees of *Bachelor of Arts* (B. A.), and *Bachelor of Science in Chemistry* (B. S. C.); a graduate course leading to the degree of *Master of Arts*; and special courses in music leading to a certificate or diploma.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily at least one hundred thirty-four semester hours in approved courses, to be chosen with the following restrictions:

1. Prescribed courses as follows: English 1, six hours; Military Art, six hours (for men), or Physical Education, four hours (for women).

2. Elective courses to be chosen from the following groups with the restrictions noted below:

Group 1: English, French, German, Greek, Italian, Latin, and Spanish.

Group 2: Astronomy, Biology, Chemistry, Geology, Mathematics, and Physics.

Group 3: Economics, Education, History, Philosophy, Political Science, and Sociology.

Group 4: Agriculture, Engineering, Fine Arts, Home Economics, Law, and Medicine.

a. The candidate may elect not more than forty hours in any one subject, and not more than eighty hours from any one group. At least eighteen hours must be elected from each of groups 1, 2, and 3, and not more than eighteen may be elected from group 4.

b. The candidate must select, not earlier than the beginning of his sophomore year and not later than the beginning of his junior year, one major subject, to be chosen from group 1, 2, or 3, in which he must complete not less than thirty hours, and two minor subjects, in which he must complete not less than eighteen and twelve hours, respectively, subject to the approval of the candidate's major professor and the dean of the college. A description of the major requirements of each department will be found under the departmental statements.

c. The candidate will be required to complete, in the combined high school and college courses, at least twenty hours of one foreign language, at least six hours of which must be taken in college classes. In computing the total, each unit of high school work shall count as equivalent to four hours of college work. The student shall continue his language study until this requirement is satisfied, which in the case of a modern language means a satisfactory working knowledge of that language.

d. The candidate must conform as closely as possible to the following schedule in the distribution of his work.

### *Freshman Year*

First Semester		Credit Hours	Second Semester		Credit Hours
English 1	.....	3	English 1	.....	3
Military Art 1 (or)	.....		Military Art 1 (or)	.....	
Physical Education 1	.....	1	Physical Education 1	.....	1
*Elective	.....	12	*Elective	.....	12
		16			16

### *Sophomore Year*

First Semester		Credit Hours	Second Semester		Credit Hours
Military Art 2 (or)	.....		Military Art 2 (or)	.....	
Physical Education 2	.....	2 or 1	Physical Education 2	.....	2 or 1
*Elective	.....	15 or 16	*Elective	.....	15 or 16
		17			17

### *Junior Year*

First Semester		Credit Hours	Second Semester		Credit Hours
*Elective	.....	17	*Elective	.....	17

*Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
*Elective .....	17	*Elective .....	17

\*To be chosen with the advice and consent of the candidate's major professor so as to meet the group requirements outlined above.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The candidate must meet the entrance, residence, and registration requirements and must complete at least one hundred thirty-six credit hours in approved courses as prescribed in the following courses of study:

*Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 1.....	4	Chemistry 1.....	4
Physics 5 and 5I.....	4	Physics 5 and 5I.....	4
English 1.....	3	English 1.....	3
Mathematics 3.....	5	Mathematics 3.....	5
Military Art 1.....	1	Military Art 1.....	1
	17		17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 5a.....	3	Chemistry 6b.....	3
Mathematics 5.....	3	Mathematics 5.....	3
Physics 2 and 2I.....	4	Physics 2 and 2I.....	4
German.....	3	German.....	3
Military Art 2.....	2	Military Art 2.....	2
*Elective .....	2	*Elective .....	2
	17		17

*Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 4.....	4	Chemistry 4.....	4
Chemistry 7a.....	3	Chemistry 7b.....	3
German.....	3	German.....	3
Biology 1.....	4	Biology 1.....	4
*Elective .....	3	*Elective .....	3
	17		17

*Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 13.....	3	Chemistry 13.....	3
Geology 1a.....	4	Geology 1b.....	4
French.....	3	French.....	3
*Elective .....	7	*Elective .....	7
	17		17

\*To be chosen with the advice and consent of the candidate's major professor so as to include less than six credit hours in chemistry.

*REQUIREMENTS FOR THE DEGREE OF MASTER OF  
ARTS*

The degree of Master of Arts is granted for graduate work based upon an undergraduate course of four years with the degree of *Bachelor of Arts* completed at this University or another college or university of equal standing. Before a student may become a candidate for the degree, however, his petition for admission to graduate standing must have the approval of the Senate Committee on Graduate Study and the dean of the college.

1. The minimum time in which a candidate may be permitted to complete the degree is one academic year. In individual cases, where the committee deems it necessary, more than one year may be required.

2. The candidate is required to complete one major subject and not more than two minor subjects in closely related courses. The major subject, including, with the thesis, at least sixteen credit hours, must be one in which the candidate has received credit in his undergraduate course for at least twenty-four credit hours. The minor subjects, occupying together twelve credit hours, must be ones in which he has received credit in his undergraduate course for at least twelve credit hours each. The choice of the candidate's major and minors is subject to the approval of the committee, the dean of the college, and the major professor.

3. Twenty-eight of the thirty-two hours required of the candidate must be regular class-room work. Candidates who are graduates of this University may pursue one-half of the required work by correspondence, provided that their undergraduate records are satisfactory to the committee and to the dean of the college.

4. A student may be admitted to graduate standing without becoming a candidate for a degree by permission of the committee and the dean of the college.

*SPECIAL COURSES IN THE DEPARTMENT OF FINE  
ARTS*

The Department of Fine Arts offers special courses, the completion of which is attested by a diploma or a certificate. The



purpose of these courses is to give opportunity to persons who do not desire to become candidates for a degree, but wish to do special work in music, art, or expression, together with a small amount of work in courses of a general cultural nature, in preparation for teaching or as a basis for further study.

Candidates for a diploma in music must meet the entrance, residence, and registration requirements and must complete satisfactorily the following course of study:

<i>First Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Foreign Language.....	3-5	Foreign Language.....	3-5
History 1 (or).....		History 1 (or).....	
Economics 1a.....	3-4	Economics 1b.....	3-4
Theory of Music 1.....	1	Theory of Music 1.....	1
Theory of Music 3.....	1	Theory of Music 3.....	1
Theory of Music 4.....	1	Theory of Music 4.....	1
*Piano, Violin, or Voice.....		*Piano, Violin, or Voice.....	
Physical Education 1.....	1	Physical Education 1.....	1
	<hr/> 16		<hr/> 16

<i>Second Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 2.....	3	English 2.....	3
Foreign Language.....	3-5	Foreign Language.....	3-5
Theory of Music 2.....	1	Theory of Music 2.....	1
*Piano, Violin, or Voice.....		*Piano, Violin, or Voice.....	
Physical Education 2.....	1	Physical Education 2.....	1
	<hr/> 17		<hr/> 17

\*In instrumental and vocal music no definite number of hours can be stated; the applicant must show the attainment of sufficient knowledge, technique, and ability before a diploma will be granted. In general, this will require from four to six years of study. In addition to the study of the major instrument, the candidate will be required to spend at least one year in the study of some other instrument or of voice, subject to the approval of the Director.

Candidates for a certificate in piano or in voice must meet the residence and registration requirements and must complete satisfactorily the following course of study:

<i>First Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
Theory of Music 1.....	1	Theory of Music 1.....	1
Theory of Music 2.....	1	Theory of Music 2.....	1
Theory of Music 3.....	1	Theory of Music 3.....	1
Theory of Music 4.....	1	Theory of Music 4.....	1
*Piano, Violin or Voice.....		*Piano, Violin, or Voice.....	
Physical Education 1.....	1	Physical Education 1.....	1

\*In instrumental and vocal music no definite number of hours can be stated; the applicant must show the attainment of sufficient knowledge, technique, and ability before a certificate will be granted.

## DEPARTMENTAL STATEMENTS

### SYMBOLS

The suffix *a* after the numeral indicates first semester courses; the suffix *b*, second semester courses. A repetition of the two (e. g. 7a, 7b) indicates courses offered either semester. A combination of the two (e. g. 7ab) indicates year courses in which credit will be allowed for one semester's work; in courses not so indicated, the second semester must be completed before credit will be allowed for the first semester.

The suffix *l* indicates laboratory courses; the suffix *c*, language composition courses.

Courses indicated by a star (\*) may be elected by graduate students for credit towards an advanced degree.

### CREDIT HOURS

The number of semester credit hours allowed in each course is identical with the number of hours per week spent upon that course, except that in laboratory, shop, or field work two to three hours will be considered equivalent to one hour of lecture or recitation.

## ANCIENT LANGUAGES

### PROFESSOR STRAUSS, MR HANCOCK

*Requirements for a Major in Latin or Greek*, thirty credit hours. Students who expect to teach Latin in the secondary schools should complete course 2 and at least six hours of more advanced work.

### COURSES

		<b>Latin</b>		
No.	Title	Credit	Prerequisites	
<b>A</b>	Cicero's Speeches and Letters.....	8	†	
<b>1</b>	Vergil's <i>Æneid</i> .....	10	†	
<b>2</b>	Cicero and Livy.....	8	†	
<b>3</b>	Roman Public and Private Life.....	6	2	
<b>3c</b>	Prose Composition .....	2	2	
<b>4</b>	Horace and Tacitus .....	6	2	
<b>*5</b>	Roman Poetry .....	6	3 or 4	
<b>*6</b>	Horace and Vergil .....	4	3 or 4	

		Greek	
1a	Elementary Greek .....	5	None
2b	Xenophon .....	4	1a
3a	Homer .....	3	2b
4b	Plato .....	3	3a
5	Greek Historians .....	4	3a, 4b
*6	The Attic Drama .....	6	3a, 4b
7	Advanced Prose Composition.....	2	†
8ab	Greek Literature in Translation.....	3 or 6	†

†See statement.

\*See page 62.

#### LATIN

A. CICERO'S SPEECHES AND LETTERS.—Six speeches and selections from the letters; a review of forms and syntax; an introduction to the use of good English in translation. A course designed for students who offer only two units in Latin for entrance. Four hours per week.

MR. HANCOCK.

1. VERGIL'S *ÆNEID*.—Due attention will be given to forms, syntax, and prosody, but the chief aim will be to enable the student to arrive at an appreciation of the poem as literature. A course designed for students who offer three units in Latin for entrance. Five hours per week.

MR. HANCOCK.

2. CICERO AND LIVY.—A study of Cicero's *De Amicitia* and selections from Livy, with a thorough review of forms and syntax at the beginning of the course and by means of prose composition one hour per week. Emphasis is laid on the art of translation. Four hours per week.

PROFESSOR STRAUSS.

MR. HANCOCK.

3. ROMAN PUBLIC AND PRIVATE LIFE.—Selections from Cicero, Pliny, Juvenal, and Martial. Three hours per week.

PROFESSOR STRAUSS.

3c. PROSE COMPOSITION.—The translation of connected passages of idiomatic English into idiomatic Latin. One hour per week.

PROFESSOR STRAUSS.

4. HORACE AND TACITUS.—Horace, *Odes and Epodes*; Tacitus, *Annals*; parallel and sight reading; a study of the metres of Horace. Three hours per week.

PROFESSOR STRAUSS.

5. ROMAN POETRY.—Reading of selections from Roman poets.

An attempt will be made to secure for the student a good general view of the whole field of Roman poetry. Three hours per week.

PROFESSOR STRAUSS.

6. HORACE AND VERGIL.—Horace, *Satires and Epistles*; Vergil, *Eclogues and Georgics*; history of Roman literature. Two hours per week.

PROFESSOR STRAUSS.

#### GREEK

1a. ELEMENTARY GREEK.—Assuming on the part of the student a fair knowledge of Latin grammar, the essentials of Greek form and syntax are given rapidly, with much illustrative reading and comparatively little drill. A course designed for students who offer no Greek for entrance and who wish to begin a study of the language. Five hours per week.

MR. HANCOCK.

2b. XENOPHON.—Selections from *Anabasis*, *Cyropedia*, and *Memorabilia*; practical review of syntax, some prose composition and sight reading. Four hours per week.

MR. HANCOCK.

3a. HOMER.—Selections from the *Iliad*. Syntax, prosody, and dialect will be taught as incidental to the literary qualities of the poem. Three hours per week.

PROFESSOR STRAUSS.

4b. PLATO.—The *Apology* and *Crito*; prose composition and sight reading. Three hours per week.

PROFESSOR STRAUSS.

5. GREEK HISTORIANS.—Selections from Herodotus and Thucydides. Two hours per week.

MR. HANCOCK.

6. THE ATTIC DRAMA.—Selected plays of the four great Greek dramatists. Three hours per week.

MR. HANCOCK.

7. ADVANCED PROSE COMPOSITION.—An advanced course in prose composition designed to accompany courses 5 and 6. One hour per week.

MR. HANCOCK.

8ab. GREEK LITERATURE IN TRANSLATION.—The aim of this course is to give students of any literature a knowledge of the

form and content of the literature that has influenced most widely all others. In the first semester, epic and lyric poetry will be studied; in the second semester, prose and drama. Lectures, class reading, collateral reading, and frequent examinations. This course is not open to freshmen. Three hours per week.

MR. HANCOCK.

## BIOLOGY

PROFESSOR PICKEL

The courses in biology have been arranged to meet the needs of three classes of students, namely: those who desire to become acquainted with the fundamental principles of plant and animal life, as a part of a liberal education; those who intend to study medicine; and those who wish to make a more thorough study of biological science to obtain the technical training necessary for subsequent investigation or for teaching.

*Requirements for a Major in Biology*, thirty credit hours, to include courses 1 or 2, and either 3a, 3b, 4, 5a, 5b, 6, and 7, or 8, 9, and 11a or 11b. Students preparing for the study of medicine are advised to elect courses 1 or 5, 4, 6, 7, and 8 or 9. Students expecting to teach botany in the secondary schools should complete at least courses 1 and 5. In addition to these requirements, students who expect to become grade school teachers should elect courses 9 and 11a.

### COURSES

No.	Title	Credit	Prerequisites
1	General Biology .....	8	None
2	General Botany .....	8	None
*3a	Plant Morphology .....	3	1 or 2
*3b	Plant Physiology .....	3	1 or 2
4	Bacteriology .....	8	1, Chem. 1
5a	Invertebrate Zoology .....	4	None
5b	Vertebrate Zoology .....	4	None
*6	Comparative Anatomy of Vertebrates .....	6	1, or 5ab
*7	Animal Histology and Embryology .....	10	1 or 2
8	Physiology .....	8	†
9	Physiological Chemistry .....	8	8, Chem. 1
10	Nature Study .....	4	1
11a	General Hygiene .....	3	None
11b	Theoretical Biology .....	3	†
12a	The Teaching of Biology .....	3	1, 2, 5, 8

†See statement.

\*See page 62.

1. GENERAL BIOLOGY.—An introduction to the field of biological science with a study of the structure, functions, behavior, and

life history of organisms from the plant and animal kingdoms. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR PICKEL.

2. GENERAL BOTANY.—A general survey of the plant kingdom, with due emphasis on the application of botany to agriculture and horticulture. A study is made of plant physiology and the morphological characteristics of the larger groups. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR PICKEL.

3a. PLANT MORPHOLOGY.—A course dealing with the structure and life histories of representative plants from the main groups. Lectures and recitations one hour, laboratory practice four hours per week.

PROFESSOR PICKEL.

3b. PLANT PHYSIOLOGY.—A study of the fundamental physiological processes of plants. Lectures and recitations one hour, laboratory practice four hours per week.

PROFESSOR PICKEL.

4. BACTERIOLOGY.—A study of the preparation of nutrient media, the characteristics of bacteria, types and effects of bacteria, isolating and preserving pure cultures, microscopical preparations, bacteria of the soil, the water, and the air, and pathogenic forms and their relation to disease. Lectures and recitations one hour, laboratory practice six hours per week.

PROFESSOR PICKEL.

5ab. INVERTEBRATE AND VERTEBRATE ZOOLOGY.—A general course treating of the fundamental facts of zoological science and the laws of development, heredity, variation, and correlation. Field work on the local fauna. Lectures and recitations two hours, laboratory practice and field work four hours per week.

PROFESSOR PICKEL.

6. COMPARATIVE ANATOMY OF VERTEBRATES.—A study of the comparative anatomy of acrania, cyclostomes, sharks, fishes, amphibians, reptiles, birds, and mammals. Lectures and recitations one hour, laboratory practice four hours per week.

PROFESSOR PICKEL.

7. ANIMAL HISTOLOGY AND EMBRYOLOGY.—Instruction in his-



tological and embryological methods of technique, designed for students who expect to study medicine. Lectures and recitations two hours, laboratory practice six hours per week.

PROFESSOR PICKEL.

8. **PHYSIOLOGY.**—A study of the physiology and hygiene of the human body. A knowledge of elementary physiology is required. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR PICKEL.

9. **PHYSIOLOGICAL CHEMISTRY.**—A course dealing with the physiology of foods, digestion and nutrition, blood circulation and the respiratory mechanism, the excretions and urine analysis, and the functions of the brain, spinal cord, nerves, and muscles. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR PICKEL.

10. **NATURE STUDY.**—A course in nature study and systematic science, designed for prospective teachers. Lectures two hours per week.

PROFESSOR PICKEL.

11a. **GENERAL HYGIENE.**—A treatment of personal and public hygiene from a general rather than a technical standpoint. This course is open only to juniors and seniors. Lectures and assigned readings three hours per week.

PROFESSOR PICKEL.

11b. **THEORETICAL BIOLOGY.**—A study of variation, selection, evolution, heredity, eugenics, and some of the broader and more general problems in biology, including a consideration of the application of biological facts and principles to the solution of social problems. This course is open only to juniors and seniors, and to sophomores who have six hours credit in the department. Lectures and recitations three hours per week.

PROFESSOR PICKEL.

12a. **THE TEACHING OF BIOLOGY.**—A study of the selection of courses, methods of instruction, collecting and preserving laboratory material, laboratory equipment and management, and a comparison of text books, designed for prospective high school teachers. Lectures and recitations three hours per week.

PROFESSOR PICKEL.

## CHEMISTRY

PROFESSOR GUY, ASSOCIATE PROFESSOR MORROW,  
MR. STURGEON

*Requirements for a Major in Chemistry*, thirty credit hours. The character of the courses required will depend upon the student's purpose. For those expecting to teach chemistry in the secondary schools, courses 1, 4ab, 5a (or 5b), 6ab, and 13 are recommended, to be supplemented by courses in physics, mathematics, and education. For those preparing for the study of medicine, courses 1, 4ab, 5a (or b), 6ab, 8, and 12a are recommended, to be accompanied by courses in physics, biology, and modern languages. For those preparing for graduate work in chemistry, courses 1, 4ab, 5a (or 5b), 6ab, 7a (or 7b), 8, 12a, 13, and 14a are recommended, to be supported by a liberal amount of work in physics, mathematics, and modern languages.

The Department of Chemistry offers a special course leading to the degree of Bachelor of Science in Chemistry (see page 59), which may be pursued as a preparation for professional work in chemistry, or as a basis for graduate study in chemistry or medicine.

## COURSES

No.	Title	Credit	Prerequisites
1	General Chemistry .....	8	None
3a	Organic Chemistry .....	3	1
4ab	Organic Chemistry .....	4 or 8	1
5a, 5b	Qualitative Analysis .....	3	1
6ab	Quantitative Analysis .....	3 or 6	5a (or 5b)
7a, 7b	Advanced Quantitative Analysis .....	3	6ab
*8	Advanced Organic Chemistry .....	6	4, 6ab
*9	Organic Preparations .....	6	†
10b	Household Chemistry .....	4	1
11b	Metallurgy and Gas Analysis .....	2	1, †
*12a	Physical Chemistry .....	4	6ab, Phys. 1, Math. 7
13	Advanced Inorganic Chemistry .....	6	6ab
*14a	Industrial Chemistry .....	3	4, 6ab
*15	Research Work .....	†	†
*16	Journal Meetings .....	†	†

†See statement.

\*See page 62.

1. GENERAL CHEMISTRY.—An elementary course in general chemistry, including a study of the non-metals and their compounds, the first semester, and of the metals and their compounds, the second semester. The laboratory exercises embrace a number of quantitative experiments, which illustrate the accuracy

and definiteness of chemical laws, and at the same time train the student in observation and in the manipulation of chemical apparatus. A knowledge of physics is desirable though not essential. Lectures and recitations three hours, laboratory practice three hours per week.

PROFESSOR GUY.

ASSOCIATE PROFESSOR MORROW.

MR. STURGEON.

3a. ORGANIC CHEMISTRY.—An introduction to organic chemistry, designed especially for students in the course in agriculture. A brief study is made of the more important reactions of the aliphatic and aromatic series and other familiar organic compounds. Lectures and recitations three hours per week.

PROFESSOR GUY.

4ab. ORGANIC CHEMISTRY.—A course in elementary organic chemistry, designed for students who wish to make a more thorough study of the subject than is offered in course 3a. The ground covered is somewhat the same but the subject matter is more theoretical and detailed. Lectures and recitations three hours, laboratory practice three hours per week.

ASSOCIATE PROFESSOR MORROW.

5a, 5b. QUALITATIVE ANALYSIS.—A practical course in qualitative analysis, including a study of the reactions, separations, and detection of the principal metals and acids. Lectures and recitations one hour, laboratory practice six hours per week.

MR. STURGEON.

6ab. QUANTITATIVE ANALYSIS.—A study of the more important methods of gravimetric and volumetric analysis. The student is drilled in these until he is able to obtain fairly accurate results in the analysis of simpler chemical compounds. Lectures and recitations one hour, laboratory practice six hours per week.

MR. STURGEON.

7a, 7b. ADVANCED QUANTITATIVE ANALYSIS.—An advanced course in quantitative analysis, dealing chiefly with technical and commercial problems, such as the analysis of gas, water, fuel, and cements, and the electro-chemical precipitation of metals. This is primarily a laboratory course and may therefore be adapted to suit the needs of the individual student. Lectures and conferences with the individual student will be held at such intervals

as the instructor deems necessary. Laboratory practice not less than nine hours per week.

MR. STURGEON.

8. **ADVANCED ORGANIC CHEMISTRY.**—An advanced course, designed for those who wish to make a more thorough study of the field of organic chemistry. Lectures and recitations three hours per week.

PROFESSOR GUY.

9. **ORGANIC PREPARATIONS.**—A laboratory course in advanced organic chemistry, based on such texts as Levy and Gatterman. A reading knowledge of French and German is desired. Laboratory practice nine hours per week.

PROFESSOR GUY.

10b. **HOUSEHOLD CHEMISTRY.**—A study of the chemistry of foods and other household materials, designed especially for students in the course in home economics. Lectures and recitations three hours, laboratory practice three hours per week.

ASSOCIATE PROFESSOR MORROW.

11b. **METALLURGY AND GAS ANALYSIS.**—A course in metallurgy and gas analysis, designed especially for students in the courses in engineering. A study will be made of the occurrence of the ores of the more important metals and the practical methods of obtaining these metals from their respective ores. Stress will be laid upon the composition of special steels and other alloys such as are in constant use by the practical engineer. The laboratory exercises will consist of experiments in gas analysis and other such simple practical quantitative analyses as may be useful to the engineer. Lectures and recitations one hour, laboratory practice three hours per week.

MR. STURGEON.

12a. **PHYSICAL CHEMISTRY.**—A course in physical chemistry, designed especially for those who expect to major in chemistry. A knowledge of physics is required. Lectures and recitations three hours, laboratory practice three hours per week.

PROFESSOR GUY.

13. **ADVANCED INORGANIC CHEMISTRY.**—A thorough review of the principles of inorganic chemistry, designed especially for those students who expect to teach chemistry, or who expect to stand

examinations for government positions. Lectures and recitations three hours per week.

ASSOCIATE PROFESSOR MORROW.

14a. INDUSTRIAL CHEMISTRY.—A study of the practical application of chemistry to commerce. Special attention will be given to the processes as carried out by some of the larger manufacturing industries, such as preparation of glass, alkali, sulphuric acid, and fertilizers. Lectures and recitations three hours per week.

PROFESSOR GUY.

15. RESEARCH WORK.—Problems in research work will be given to graduate students competent to undertake such work. A reading knowledge of French and German is desired. Credit in this course will vary with the amount of work done.

PROFESSOR GUY.

16. JOURNAL MEETINGS.—The instructors and advanced students of the department will meet twice each month for discussion of articles in current chemical journals. No credit is given in this course.

## ECONOMICS AND SOCIOLOGY

PROFESSOR NOURSE, MR. WATERMAN

The courses offered in this department are designed to give instruction in the fundamentals of economic theory and in problems of current economic, social, and public interest, aiming to prepare its students for the duties of citizenship and for business and professional careers. The work is developed through class-room discussions and written problems, the student's experience being supplemented by a moderate amount of collateral reading.

*Requirements for a Major in Economics*, thirty credit hours, including courses 15a and 15b and not less than twelve semester hours from courses 1a, 1b, 3a, 3b, 4a, and 4b.

### COURSES

No.	Title	Credit	Prerequisites
1a	Natural Resources and their Administration.....	4	None
1b	Labor—Its Employment and Reward.....	4	None
3a	Markets and Transportation.....	3	None

3b	Forms of Business Organization.....	3	None
4a	Money and the Price System.....	3	1a, 1b, or 3a, 3b
4b	Capital and Its Institutions.....	3	1a, 1b, or 3a, 3b
6a	Labor Organization and Legislation.....	2	1b
7a	Elementary Sociology.....	3	None
7b	Problems in Social Betterment.....	3	None
8a	Socialism .....	2	1a, 1b
8b	Insurance .....	2	1a, 1b
10a	Practical Banking .....	3	4b
11b	Government Regulation of Industries.....	3	3a, 3b
12	Agricultural Economics .....	6	None
13a	Corporate Finance and Investments.....	3	3b
13b	Public Finance .....	3	1a, 1b
15a	Economic History of the United States.....	2	1a, 1b
15b	Current Economic Problems.....	2	1a, 1b, 15a
20	Business Law .....	6	None

Note.—In general the courses in this department are open only to sophomores and upperclassmen. Freshmen whose high school preparation has been good may, however, be admitted to courses 1a, 1b, 3a, or 3b upon consent of the head of the department.

1a. NATURAL RESOURCES AND THEIR ADMINISTRATION.—A study of the economic qualities of land and its appurtenances, and the technical conditions of their utilization; private ownership and other forms of control; rent and the value of land, conservation, and land policy. Lectures and recitations four hours per week.

PROFESSOR NOURSE.

1b. LABOR—ITS EMPLOYMENT AND REWARD.—An introductory study of the human factor in our economic system; the quantity and quality of workers, opportunities for their employment, and efficiency of organization; the market value of labor and the conditions surrounding wage bargains; the simpler phases of present labor problems. Lectures and recitations four hours per week.

MR. WATERMAN.

3a. MARKETS AND TRANSPORTATION.—A course dealing with the significance of the market and the principal types of market organization; transportation facilities as determinants of market situations; the economics of the good roads movement, and the cost and service of inland waterways and steam and electric railways; ocean ports and carriers. Lectures and recitations three hours per week.

MR. WATERMAN.

3b. FORMS OF BUSINESS ORGANIZATION.—A critical discussion of the individual, the partnership, the corporate, and the co-opera-



tive methods of organizing the factors of production into business enterprises; the economic reasons for the growth of trusts; the co-operative movement here and abroad; scientific management as a factor in operating efficiency; the size of the most productive unit. Lectures and recitations three hours per week.

PROFESSOR NOURSE.

4a. MONEY AND THE PRICE SYSTEM.—A study of the relation of value to price, the price-making process, barter and the evolution of money; development of the system of metallic and paper currency now in use in the United States; pecuniary organization and the business cycle. Lectures and recitations three hours per week.

PROFESSOR NOURSE.

4b. CAPITAL AND ITS INSTITUTIONS.—A study of the function of capital goods in the productive process; capital accumulation and the rate of interest; banks, security brokers, and other agencies for the mobilization of capital; the nature and functions of credit. Lectures and recitations three hours per week.

PROFESSOR NOURSE.

6a. LABOR ORGANIZATION AND LEGISLATION.—Origin and development of labor organizations, strikes and boycotts, arbitration, conciliation, and government control; the problem of woman and child labor, profit-sharing and co-operation, and the minimum wage; unemployment and the insecurity of the worker's position. Lectures and recitations two hours per week.

MR. WATERMAN.

7a. ELEMENTARY SOCIOLOGY.—A study of the antiquity of man; folk-ways and primitive customs; the origin of modern institutions; classification of social activities; social control of individual conduct; and the various theories of social progress. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

7b. PROBLEMS IN SOCIAL BETTERMENT.—An examination into the nature, causes, and treatment of selected social problems, crime, pauperism, mental defect, intemperance, and juvenile delinquency, discussed in the light of modern sociological theory. Lectures and recitations three hours per week.

MR. WATERMAN.

8a. **SOCIALISM.**—A study of historical background of socialism, the work of Marx, and various modern schools of socialistic thought; character and scope of the present socialistic movement; socialism, as a criticism of classical political economy or existing institutions; socialism, as a theory of social evolution and as a program of social reform. Lectures and recitations two hours per week. (*Not offered in 1917-18.*)

8b. **INSURANCE.**—A course dealing with the economic functions of insurance, types of life policies, methods of rate-making, agency and investment; fire and other forms of property insurance; the problem of government regulation; social insurance. Lectures and recitations, two hours per week. (*Not offered in 1917-18.*)

10a. **PRACTICAL BANKING.**—A study of National banks and the Federal Reserve system; state banking systems (with special reference to Arkansas); trust companies and private bankers; a practical study of organization and operation. Lectures and recitations three hours per week.

MR. WATERMAN.

11b. **GOVERNMENT REGULATION OF INDUSTRIES.**—A study of the mediæval industrial policy; the problem created by the growth of large incorporated business; pools, trusts, holding companies, gentlemen's agreements; the Sherman Act and subsequent state and federal legislation; government regulation of railways; the Federal Trade Commission and the enlargement of the field of state control. Lectures and recitations three hours per week.

MR. WATERMAN.

12. **AGRICULTURAL ECONOMICS.**—A course dealing with the principles of economics as applied to the concrete problems of rural life; the relation of agriculture to the other industries of our country; economic organization of the business of agriculture, transportation and the marketing of farm products, rural credits, and co-operative enterprises; the problem of distribution as touching rents and values of farm lands, farm labor and wages, rates of interest and profits in agriculture. A course designed for all persons identified with rural communities, teachers, merchants, bankers, as well as those who expect to engage directly in farming. Lectures and recitations three hours per week.

PROFESSOR NOURSE.

13a. CORPORATE FINANCE AND INVESTMENTS.—A course dealing with organization of the corporation; the problem of proper capitalization; the financial plan, sale of securities, management of corporate income, receivership and reorganization; the investor's problem of ascertaining the earning power and value of bonds and stocks; suitability of various securities to different investment needs. Lectures and recitations three hours per week.

MR. WATERMAN.

13b. PUBLIC FINANCE.—The growth of public expenditures; purpose and methods of budget-making; sources of public revenue, systems of collection and administration. Special attention will be given to the problems of state and local taxation. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

15a. ECONOMIC HISTORY OF THE UNITED STATES.—A critical study of the events of our history in the light of economic principles; the trend of past industrial development and the source of present conflicts. Lectures and recitations two hours per week.

PROFESSOR NOURSE,

15b. CURRENT ECONOMIC PROBLEMS.—Using course 15a as a foundation, an attempt is made to analyze our present-day problems and to get down to the essential issues upon which modern industrial society divides. The significance of property rights, separation of economic classes, social control of industry, and the goal of economic effort are the main topics dealt with. Lectures and recitations two hours per week.

PROFESSOR NOURSE.

20. BUSINESS LAW.—A brief examination of those phases of law which particularly concern the business man, such as contracts, agency, partnerships and corporations, common carriers, transfer of real and personal property. Lectures and recitations three hours per week. Credit will be allowed to students in the courses in engineering for the first semester of this course when it is followed the second semester by Electrical Engineering 22b.

MR. WATERMAN.

## ENGLISH

PROFESSOR JONES, ASSISTANT PROFESSOR WILLIAMS, MISS HOLCOMBE, MISS DAVIS, MR. CURTISS, MISS CABEEN

The aim of the courses in the department of English is (1) to train students to write English clearly and correctly, and (2) to teach them to understand and to appreciate the best in literature. Every course in composition, therefore, is accompanied by a considerable amount of required readings, and every course in literature requires a certain amount of written criticism.

*Requirements for a Major in English*, thirty-six credit hours, including courses 1, 2, 4a or 4b, and two from the following three, 10, 11b, and 12. Students who expect to teach English in the secondary schools should complete at least twelve hours, in addition to English 1 and 2, with some credits in literature and some in language. A course in the teaching of English should be included.

## COURSES

No.	Title	Credit	Prerequisites
1	Rhetoric and Composition.....	6	†
2	English Literature in Outline.....	6	1
3b	American Literature .....	3	1, 2
4a	Exposition and Argumentation.....	3	1, 2
4b	The Short Story .....	3	1, 2
5a	Prose Fiction .....	3	1, 2
6b	Lyric Poetry .....	3	1, 2
7a	Seventeenth Century Literature.....	3	1, 2
8a	Eighteenth Century Literature.....	3	1, 2
9a	Romantic Poets .....	3	1, 2
*10	Chaucer .....	6	†
*11b	Anglo-Saxon .....	3	1, 2
*12	Shakespeare .....	6	1, 2
13	English Composition .....	6	†
*14a	Elizabethan Drama .....	3	1, 2
15b	The Teaching of English.....	3	†
16	Composition and Literature.....	6	†
17b	Tennyson and Browning.....	3	1, 2
18	Newspaper Writing .....	6	†
*19b	Contemporary Dramatists .....	3	1, 2
20b	Milton .....	3	1, 2
21b	Nineteenth Century Essayists.....	3	1, 2
*22a	Literary Criticism .....	3	†
*24b	Comparative Literature .....	3	1, 2
25b	Intercollegiate Debate .....	3	†

†See statement.

\*See page 62.

Note.—Not more than one course in composition may be taken in any one year without the permission of the Department.

1. RHETORIC AND ENGLISH COMPOSITION.—Lectures, recitations, themes, and conferences, three hours per week; required supplementary reading, chiefly in recent literature; practice in exposition, argumentation, description, and narration. The instruction in composition will be based, in general, upon a study of modern masters of English prose and upon the student's own themes. An outline of the course will be furnished each student at the first meeting of the class. *Required of all freshmen who present at least three units in English for entrance, except those who are admitted to English 16.*

ASSISTANT PROFESSOR WILLIAMS.

MISS HOLCOMBE.

MISS DAVIS.

MR. CURTISS.

MISS. CABEEN.

2. ENGLISH LITERATURE IN OUTLINE.—This course is intended to give the student a general view of the history and development of English literature from the Anglo-Saxon times to the end of the nineteenth century. Selected masterpieces, representative of different periods, are studied in class. A considerable amount of outside reading and weekly reports are required. The class meets as a whole one hour a week for lectures on the periods in English literature, and in small sections two hours a week for more detailed study of the reading required.

PROFESSOR JONES.

ASSISTANT PROFESSOR WILLIAMS.

MR. CURTISS.

3b. AMERICAN LITERATURE.—Considerable stress is laid on Colonial and Revolutionary literature with readings and reports on interesting material that the student has difficulty in finding for himself. A study is then made of Irving, Cooper, Bryant, Poe, Emerson, Lowell, Longfellow, Hawthorne, Whittier, Holmes, and Whitman, followed by a consideration of the minor poets of the South. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR WILLIAMS.

4a. ENGLISH COMPOSITION.—This course is divided into two sections, one for exposition, and one for argumentation. The purpose of the course is to teach advanced students the principles of exposition and argumentation and to develop reasoning power

and literary style, as well as the ability to write clear and vigorous prose. Lectures and recitations three hours per week.

PROFESSOR JONES.

MISS HOLCOMBE.

4b. THE SHORT STORY.—The work of this course consists partly in copious reading and criticism of short stories, and partly in story writing. The purpose of the course is to give the student a sound critical knowledge of the modern short story, and to offer practical training in the writing of fiction to those who have the necessary ability. Lectures and recitations three hours per week.

PROFESSOR JONES.

5a. ENGLISH PROSE FICTION.—The course involves a study of various types of prose fiction, the personalities of the writers, and the characteristics of their works. Scott, Jane Austen, Dickens, Thackeray, George Eliot, Hawthorne, Charlotte Bronte, Reade, and Hardy are some of the authors studied. Lectures, reading, and critical reports, three hours per week. (*Not offered in 1917-18.*)

6b. LYRIC POETRY.—A study of the greatest examples of lyric poetry, not only in English but in other literatures, wherever adequate translations are available. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

7a. SEVENTEENTH CENTURY LITERATURE.—A consideration of the works of Bacon, Browne, and Walton; a study of the beginnings of modern prose in Dryden; lyric poetry of the reigns of James I and Charles I; some features of the Restoration drama; allegory and satire. Lectures, assigned readings, and reports three hours per week. (*Not offered in 1917-18.*)

8a. EIGHTEENTH CENTURY LITERATURE.—Primarily a study of the prose and poetry of the Classical period, with an attempt to outline the principles of Classicism. Some attention is given to the beginnings of Romanticism, as shown in the work of such writers as Thomson, Collins, Gray, Cowper, Chatterton, Macpherson, Burns, and Blake. A brief treatment of the rise of literary types, such as the periodical essay and the novel. Lectures and recitations three hours per week.

PROFESSOR JONES.



9a. BRITISH ROMANTIC POETS OF THE NINETEENTH CENTURY.—This course deals principally with the poetry of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. Through the work of these men is traced the development of English Romantic poetry, as related to the life and thought of the nineteenth century. Lectures and recitations three hours per week.

MR. CURTISS.

10. CHAUCER.—A study of Chaucer's language and literary style for the purpose of comprehending his genius as a poet. Students must have the consent of the instructor before electing this course. Lectures and recitations three hours per week.

PROFESSOR JONES.

11b. ANGLO-SAXON.—The purpose of this course is to give students a knowledge of the earliest form of English. Constant comparison of modern English with Anglo-Saxon is made. Lectures and recitations three hours per week.

PROFESSOR JONES.

12. SHAKESPEARE.—A critical study of six plays. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR WILLIAMS.

13. ENGLISH COMPOSITION.—A course in technical writing, with some study of scientific and technical models. This course is open only to students in the courses in agriculture and engineering, who have credit for English I. Lectures, recitations, themes, and conferences, three hours per week.

PROFESSOR JONES.

14a. THE DRAMA IN ENGLAND FROM 1580 TO 1642.—While the course deals chiefly with Lyly, Greene, Kyd, Peele, Marlowe, Shakespeare, Ben Jonson, Dekker, Marston, Heywood, Chapman, Middleton, Beaumont and Fletcher, Webster, Ford, Massinger, and Shirley, from a dramatic and literary point of view, a historical background will be given by lectures on the pre-Elizabethan drama as an introduction to the course proper. Lectures, readings, and reports three hours per week.

ASSISTANT PROFESSOR WILLIAMS.

15b. THE TEACHING OF ENGLISH.—This course presents the aims, methods, and organization of the English work of the high school course. It includes practice work in the correction

of themes, a study of some of the classics used in high school reading, and a rapid review of some parts of grammar and rhetoric. Students must have the consent of the instructor before electing this course. Lectures and recitations three hours per week.

PROFESSOR JONES.

16. COMPOSITION AND LITERATURE.—This course corresponds, in part, to English I and is intended for those students who have had four years of English in the high school and who have shown marked proficiency in the subject. The first semester will be devoted to a study of exposition and argumentation, and the second to a study of various types of literature. Lectures, recitations, theme work, and assigned readings, three hours per week.

PROFESSOR JONES.

17b. BROWNING AND TENNYSON.—Emphasis is placed, in this course, upon the art and thought of Browning and Tennyson, in their relation to modern life. Lectures and recitations three hours per week.

MR. CURTISS.

18. NEWSPAPER WRITING.—The purpose of this course is to give training in the theory and practice of newspaper work. Reporting, copy-reading, and proof-reading are dealt with as practically as possible by carrying on much of the work of the class in connection with student publications and the local newspapers. No student may elect this course without the consent of the instructor. Lectures and recitations three hours per week.

PROFESSOR JONES.

19b. THE CONTEMPORARY DRAMA.—A study of contemporary plays in Europe and America from the literary, dramatic, and social points of view, with discussion and illustration of dramatic principles. Some of the playwrights to whom particular attention is given are Ibsen, Hauptmann, Sudermann, Rostand, Mæterlinck, Pinero, Jones, Galsworthy, Thomas, Fitch, and Moody. Lectures, reading, and dramatic criticism, three hours per week. (*Not offered in 1917-18.*)

20b. MILTON.—An intensive study of the poetry of Milton, with

some consideration of his prose. Lectures and recitations three hours per week.

MISS HOLCOMBE.

21b. ESSAYISTS OF THE NINETEENTH CENTURY.—Attention is given chiefly to Lamb, DeQuincey, Macaulay, Carlyle, Emerson, Newman, and Arnold. Lectures, readings, and reports, three hours per week. (*Not offered in 1917-18.*)

22a. LITERARY CRITICISM.—The aim of this course is to present the more generally accepted principles of literary criticism and to apply them to the chief types of literature, such as the drama, the essay, prose fiction, and poetry. Students must have the consent of the instructor before electing this course. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

24b. COMPARATIVE LITERATURE.—A general survey of some of the more important works of continental writers and of literary tendencies since the Renaissance, with stress upon such as have been influential in England. A number of masterpieces, either individually important or representing great movements in literature, will be read in translation. Three hours per week.

PROFESSOR JONES.

25b. INTERCOLLEGIATE DEBATE.—The question for intercollegiate debate is studied and briefed, and frequent practice debates are held. This course is open only to students who have been awarded places on the intercollegiate debating squad.

MR. WATERMAN.

## FINE ARTS

PROFESSOR TOVEY, MISS GALBRAITH, MRS. CROCKETT, MRS. BATEMAN, MISS METZGER, MISS BELL, MR. MITCHELL,  
MR. HANSARD

The Department of Fine Arts offers courses in theory of music, piano, violin, voice, art, and expression.

A statement of the requirements for admission will be found on page 30, for regular students, and on page 42, for special students. A statement of tuition and fees will be found on page 44.

Courses in music and art, leading to a diploma or a certificate are outlined on page 60.

The courses in theory of music, piano, violin, and voice may be elected with credit by students who are candidates for a diploma or a certificate in music, and without credit by students in other courses. The courses in art and expression may be elected with credit, in no case to exceed eighteen semester hours, by students in all courses.

COURSES			
Theory of Music			
No.	Title	Credit	Prerequisites
1	Harmony	2	†
2	Advanced Harmony	2	†
3	History of Music	2	†
4	Opera Study	2	†
5	Counterpoint	2	†
Piano			
1	Preparatory Grade	4	†
2	Intermediate Grade	4	†
3	Advanced Grade	4	†
4	Accompaniment	4	†
5	The Teaching of Music	4	†
Violin			
1	First and Second Grades	4	†
2	Third and Fourth Grades	4	†
3	Fifth and Sixth Grades	4	†
Voice			
1	Preparatory Grade	4	†
2	Intermediate Grade	4	†
3	Advanced Grades	4	†
Art			
1	Pictorial Composition	4	†
2ab	Theory of Design	2 or 4	†
3	Drawing	2-4	†
4	Still Life and Landscape Painting	2-4	†
5	Public School Drawing	4	†
6	History of Art	6	†
Expression			
1	Vocal Expression	4	†
2a	The Teaching of Reading	2	1, †
3ab	Vocal Interpretation	2 or 4	1, †
4	Dramatic Interpretation of Shakespeare's Plays	4	1, †
5	Vocal Expression as Art	2 or 4	1, †
6	The Art of Play Reading	2	†

† Permission must be secured from the instructor in charge before registering for any course in this department.

#### THEORY OF MUSIC

1. HARMONY.—Keys, scales, and signatures; simple part writing; chords of the seventh and their inversions; altered and augmented chords; modulation. One hour per week.

MR. MITCHELL.

2. ADVANCED HARMONY.—Modulation continued; suspension;

passing chords; unharmonious notes; organ point; harmonization of melodies; playing of figures bases; double chants and chorals. One hour per week.

MR. MITCHELL.

3. HISTORY OF MUSIC.—Music among ancient peoples; early church music; the development of polyphonic and dramatic music; the history of instrumental music and the evolution of musical instruments; the development of the opera and oratorio; modern music and musicians. One hour per week.

MR. MITCHELL.

4. OPERA STUDY.—The librettos and stories of various standard operas are studied. Concerts are given weekly, consisting of selections from Victor talking machine records with piano accompaniments. One hour per week.

PROFESSOR TOVEY.

5. COUNTERPOINT.—First semester: single counterpoint in all forms, two and three voices; second semester: single counterpoint in four voices and double counterpoint, all forms. One hour per week.

PROFESSOR TOVEY.

#### PIANO

The aim of the courses in piano music is to develop technical control and power of musical conception as adapted to artistic ends.

1. PREPARATORY GRADES.—*National Graded Course*, Books 1 and 2; simple exercises for wrist development, major scales, broken chords, and arpeggios. Sonatinas by Diabelli, Clementi, Kuhlau, Lichner; studies from Koehler, Biehl, Loeschorn, Czerny, Gurlitt; salon pieces; preparatory octave work.

PROFESSOR TOVEY.

MISS BELL.

MR. MITCHELL.

2. INTERMEDIATE GRADE.—Selected technics from Tausig, Krauss, Heller, Loeschorn, *Op. 66*; Czerny, *Op. 299*; sonatas by Mozart, Haydn, Beethoven; Mendelssohn's *Songs without Words*; Smith and Low's *Octave Studies*; duets for piano, and piano and violin; Bache's *Little Preludes and Fugues*.

PROFESSOR TOVEY.

MISS BELL.

MR. MITCHELL.

3. **ADVANCED GRADE.**—Extended scales in various accents; diminished and dominant seventh arpeggios; etudes from Czerny, *Op. 740*; Heller, *Op. 45*; Cramer; Clementi's *Gradas and Parnassum*; Kullak's *Octave Studies*; Bache's *Suites, Preludes, Fugues*; Chopin, *Op. 10* and *Op. 25, Valses, Preludes, Nocturnes*; Beethoven, *Sonatas*; compositions by Mendelssohn, Schumann, Schubert, Liszt, Grieg, MacDowell, and other modern composers.

PROFESSOR TOVEY.  
MISS BELL.  
MR. MITCHELL.

4. **ACCOMPANIMENT.**

PROFESSOR TOVEY.

5. **THE TEACHING OF MUSIC.**—A course designed for students who expect to teach music.

PROFESSOR TOVEY.

VIOLIN

The instruction in violin music is designed to form correct technique. In addition to the studies, the student is given compositions of the standard composers for the violin.

1. **FIRST AND SECOND GRADES.**—Studies by Dancla and Dont.

MR. HANSARD.

2. **THIRD AND FOURTH GRADES.**—Studies by Kayser, Kruetzer, and Schradick.

MR. HANSARD.

3. **FIFTH AND SIXTH GRADES.**—Studies by Kreutzer, Fiorillo, and Rhode.

MR. HANSARD.

VOICE

The purpose of instruction in this branch of music is the correct production of tone and the building and development of the voice according to the old Italian method. Special stress is laid on breath control, accuracy of tone, distinct articulation, the study of intervals, scale building, sight reading, and phrasing.

1. **PREPARATORY GRADES.**—Marchesi's *Individual Exercises*; Pannofka's *Vocalises, Op. 85*. Studies in sight reading and easy songs.

MRS. BATEMAN.



2. INTERMEDIATE GRADE.—Concone, *Op. 12*; Marchesi's *Individual Exercises*; Ponofka's *Vocalises*, *Op. 81*; Sieber's *Vocalises*, *Op. 94*; Concone's *Lessons*, *Op. 17*, and songs of moderate difficulty, including oratorio selections.

MRS. BATEMAN.

3. ADVANCED GRADES.—Lamperti's *Studies in Bravura*; oratorio and opera arias and more difficult songs by English, French, Italian, and German composers.

MRS. BATEMAN.

#### THEORY AND PRACTICE OF ART

The plan of incorporating a practical school of drawing and painting in a college course has been demonstrated as not only possible but very successful. The studio work is conducted in the same manner as in the purely technical art schools, while the students have the advantage of doing regular college work which renders them more sensitive to artistic impression.

No tuition is charged for any of the courses but a studio fee of two dollars is required in all courses except Public School Drawing.

1. PICTORIAL COMPOSITION.—Study and practice in composing a picture. One original composition is required each week. Lectures one hour, studio practice two hours per week.

MISS GALBRAITH.

2ab. THEORY OF DESIGN.—Two hours of theory and practice of design, and two hours of instruction and practical application of the principles of design to definite problems.

MISS METZGER.

3. DRAWING.—Drawing from casts, life, and perspective problems, four to six hours per week.

MISS GALBRAITH.

4. STILL LIFE AND LANDSCAPE PAINTING.—Painting still life and landscape with original composition, four to six hours per week.

MISS GALBRAITH.

5. PUBLIC SCHOOL DRAWING.—A critical study of the theories and methods of teaching drawing in the public schools, conducted upon pedagogic principles, designed for prospective teachers. Four hours per week.

MISS METZGER.

6. HISTORY OF ART.—A study of the history of architecture, sculpture, and painting, intended to develop an appreciation of the masters. Prints, photographs, and lantern slides will be used to illustrate the course. Three hours per week.

MISS GALBRAITH.

#### EXPRESSION

The aim of the courses in this department is (1) to secure naturalness and freedom from self-consciousness in reading and speaking and (2) to train the student to arrive at a correct understanding of literature and the appreciation of its spirit and essence through vocal interpretation. The student is made to realize that the reader's concept is mental. The voice and body are trained to willing obedience to this mentality. Close attention is given to voice culture and correct articulation.

1. VOCAL EXPRESSION.—First semester, the fundamental principles in the correct use of the body and voice in speaking and reading; second semester, accuracy of observation and care in analysis. The student is trained to read aloud simply, easily, and naturally, from such works as the Old Testament, New Testament, Emerson's Essays, Longfellow's poems, and Shakespeare's plays. Two hours per week. This course is open only to a limited number of students.

MRS. CROCKETT.

2a. THE TEACHING OF READING.—A course designed for prospective public school teachers, aiming to give a definite, practical method of instruction which shall apply to each grade. Two hours per week.

MRS. CROCKETT.

3ab. VOCAL INTERPRETATION.—An advanced course in the interpretation of literature. Special attention is given to the study of Tennyson, Browning, and the dramatic monologue, forms of literature, and literary analysis. Two hours per week.

MRS. CROCKETT.

4. DRAMATIC INTERPRETATION OF SHAKESPEARE'S PLAYS.—A careful analysis and reading of three or four plays. At the end of the year one of the plays will be given in costume by the members of the class. Students in the course are advised to take English 12. Two hours per week.

MRS. CROCKETT.

5. VOCAL EXPRESSIONS AS ART.—Impersonation, gesture, dialect, reading, recitation, preparation of programs, and "cutting" and adapting selections for the platform. Students will be required to prepare selections and present them before the class for criticism. One or two hours per week.

MRS. CROCKETT.

6. THE ART OF PLAY READING.—Plays are read aloud or put into rehearsal in order that students may vitalize the characters and perceive the fundamental thing; the reaction of one thought and emotion upon another. Frequent readings by the instructor from masterpieces of the drama are given before the class. The class is affiliated with the Drama League of America. One hour per week. This course is open only to advanced students.

MRS. CROCKETT.

## GEOLOGY

PROFESSOR DRAKE

*Requirements for a Major in Geology*, courses 1a, 1b, 2, 3, 5a, 6a, 7, 8a, and 4a or Mining Engineering 1b, in addition to which a report must be submitted in the senior year, to include maps, sections, and other necessary illustrations of some area, the geology of which the student has made a special study. Students who expect to teach geography and physiography in the secondary schools should complete, as a minimum requirement, courses 1a, 1b, and 3. A course in the teaching of science should be included. Students in the course in agriculture are recommended to take courses 1a and 1b, and students in the course in civil engineering, courses 1b, 6a, and 8a. Students who are seeking a general knowledge of geology as a part of a cultural education should elect courses 1a, 1b, and 2.

As an aid in the instruction in geology, localities about the University will be cited and some field work in those localities required of students. Within a short distance are found formations from the Cambro-Ordovician to the Pennsylvanian, inclusive. The Ozark plateau region about Fayetteville offers abundant opportunity for physiographic studies and stratigraphic mapping as well as paleontological studies.

## COURSES

No.	Title	Credit	Prerequisites
1a	Meteorology and Geography.....	4	None
1b	Physical Geology .....	4	None
2	Historical Geology .....	6	1b
*3ab	Practical Geology .....	3 or 6	1b
*4a	Paleontology .....	3	2
5a, 5b	Crystallography and Mineralogy.....	3	Math 1b Chem. 1
6a	Economic Geology .....	3	1b, 8a
*7	Petrology .....	6	5a, 8a
8a, 8b	Determinative Mineralogy and Blow-Pipe Analysis.....	3	Chem. 1

\*See page 62.

1a. METEOROLOGY AND GEOGRAPHY.—An elementary course dealing with the causes of movements of the atmosphere and waters of the oceans, the distribution of heat over the earth, and the influence of climate and environments of land and water upon plant and animal life. Lectures and recitations four hours per week.

PROFESSOR DRAKE.

1b. PHYSICAL GEOLOGY.—A study of the materials of the earth; the geologic work of the atmosphere, water, organic life, and volcanoes; and the structural features of the earth. Lectures and recitations four hours per week.

PROFESSOR DRAKE.

2. HISTORICAL GEOLOGY.—A study of the origin of the earth; earth history; the evolution of life and its relationships. Lectures and recitations three hours per week.

PROFESSOR DRAKE.

3. PRACTICAL GEOLOGY.—Field and laboratory practice nine hours per week, including exercises in the construction of geological maps and sections.

PROFESSOR DRAKE.

4a. PALEONTOLOGY.—Lectures and recitations one hour, and field and laboratory practice six hours per week, involving the collection of local fauna and its study.

PROFESSOR DRAKE.

5a, 5b. CRYSTALLOGRAPHY AND MINERALOGY.—Lectures and recitations three hours per week on the elements of geometric crystallography, followed by laboratory work on the determination of minerals.

PROFESSOR DRAKE.

6a. ECONOMIC GEOLOGY.—A course dealing with the formation,

mode of occurrence, uses, and geographic distribution of geologic products. Lectures and recitations three hours per week.

PROFESSOR DRAKE.

7. PETROLOGY.—Microscopical and macroscopical determination of minerals and rocks; classification of rocks. Lectures and recitations three hours per week.

PROFESSOR DRAKE.

8a, 8b. DETERMINATIVE MINERALOGY AND BLOW-PIPE ANALYSIS.—Exercises in the determination of minerals by the use of the blow-pipe and in the wet way. Laboratory practice six hours per week.

PROFESSOR DRAKE.

## GERMAN

PROFESSOR BRISCOE, MR. LUSSKY.

The aim of the courses in this department is to acquaint the student with the German language and literature as a means of culture. An effort is made to create a German atmosphere for the class room, and to give the student a knowledge of the history, customs, and institutions of the German people. Consideration is given to the needs of those students who wish to learn the language for use in other fields of knowledge.

*Requirements for a Major in German*, thirty-six credit hours. Students preparing to teach German in secondary schools, should complete courses 1, 2, 2c, 3, 4, 5, and 15a (or 15b), or their equivalent. A course in practice teaching of German in the Training High School should be included.

COURSES			
No.	Title	Credit	Prerequisites
A	Elementary Scientific German .....	6	†
1	Elementary German .....	10	None
2	Modern German Prose.....	6	1
2c	German Composition.....	4	1
3	Goethe and Schiller .....	6	1, 2, 2c
4	Conversation and Composition .....	6	1, 2, 2c
*5ab	History of German Literature.....	3 or 6	1, 2, 2c, 3
*7a	German Lyric and Ballad Poetry.....	3	1, 2, 2c, 3
*8b	The German Novel.....	3	1, 2, 2c, 3
*9a	The German Drama of the Nineteenth Century..	3	1, 2, 2c, 3
*10a	Advanced Composition .....	2	1, 2, 2c, 3
*11b	Middle High German.....	2	†
*12b	Advanced German Grammar.....	3	1, 2, 2c, 3, 4
*14	Current Publications .....	4	†
15a, 15b	Phonographic Laboratory .....	2	1

†See statement.

\*See page 62.

A. ELEMENTARY SCIENTIFIC GERMAN.—A brief study of the essentials of grammar, with a rapid reading of texts on a variety of subjects, such as chemistry, physics, geology, mathematics, biology, agriculture, and engineering. This course is open only to students in the courses in agriculture and engineering. Three hours per week.

PROFESSOR BRISCOE.

1. ELEMENTARY GERMAN.—Grammar, composition, and reading of easy texts with conversation; reproduction of assimilated texts. Five hours per week.

PROFESSOR BRISCOE.

MR. LUSSKY.

2. MODERN GERMAN PROSE.—Reading of prose from nineteenth century authors, such as Storm, Heyse, Hauff, Baumbach, Freytag; practice in conversation with the text as a basis; study of German idioms; written and oral reproduction of text read and assimilated; three hours per week.

MR. LUSSKY.

2C. GERMAN COMPOSITION.—A thorough review of grammar is attempted with a systematic introduction of new principles in composition; two hours per week.

MR. LUSSKY.

3. GOETHE AND SCHILLER.—A study of the lives and selected works of these authors; collateral reading and reports. Lectures and recitations three hours per week.

MR. LUSSKY.

4. CONVERSATION AND COMPOSITION.—Oral and written reproduction of stories and anecdotes; conversation and composition based on texts dealing with the geography, history, customs, and institutions of Germany; examination of text-books and discussion of methods of teaching German. Three hours per week.

PROFESSOR BRISCOE.

5a. HISTORY OF GERMAN LITERATURE.—A course dealing with the history of German literature to the middle of the eighteenth century, with reading of modern German translations from Ulphilas, the *Lay of Hildebrand*, the *Eddas*, the *Heliand*, Otfried's *Book of the Gospels*, Konrad's *Rolandlied*, the *Nibelungenlied*, *Gudrun*, Heinrich von Veldeke's *Æneid*, Hartman van Aue's *Armer Heinrich*, Wolfram von Eschenbach's *Parzival*, Gottfried



von Strassburg's *Tristan*, Walther von der Vogelweide. Lectures and recitations three hours per week.

PROFESSOR BRISCOE.

5b. HISTORY OF GERMAN LITERATURE.—The history of German literature from the middle of the eighteenth century to the present; a study of literary movements; reading of selected works from the principal writers of the period. Lectures, collateral readings, and reports, three hours per week.

PROFESSOR BRISCOE.

7a. GERMAN LYRIC AND BALLAD POETRY.—Lyrics and ballads of the eighteenth and nineteenth centuries; collateral readings and reports. Three hours per week.

PROFESSOR BRISCOE.

8b. THE GERMAN NOVEL.—A study of the novel from its origin to the present; extensive reading with reports. Students who elect this course must be able to read German with ease. Lectures and assigned readings three hours per week.

MR. LUSSKY.

9a. THE GERMAN DRAMA OF THE NINETEENTH CENTURY.—Study of selected works from Kleist, Grillparzer, Hebbel, Ludwig, Wildenbruch, Sudermann, Hauptmann, and Fulda. Lectures and recitations three hours per week.

MR. LUSSKY.

10a. ADVANCED COMPOSITION.—Original composition, letter writing, and commercial correspondence. Compositions will be discussed in the class and errors of syntax and style pointed out. Two hours per week. (*Not offered in 1917-18.*)

11b. MIDDLE HIGH GERMAN.—Grammar and selected readings, two hours per week. Permission must be obtained from the instructor before registering for this course. (*Not offered in 1917-18.*)

12b. ADVANCED GERMAN GRAMMAR.—A systematic study of modern German grammar, intended primarily for students who are preparing to teach German. Lectures and discussions three hours per week.

PROFESSOR BRISCOE.

14. CURRENT PUBLICATIONS.—Reading and discussion of articles in leading German periodicals, two hours per week. Per-

mission must be obtained from the instructor before registering for this course. (*Not offered in 1917-18.*)

15a, 15b. PHONOGRAPHIC LABORATORY.—Practice in ear training, pronunciation, sentence melody, and intonation by means of phonographic records dealing with conversational as well as literary subject matter. Four hours of laboratory work per week with frequent oral tests.

PROFESSOR BRISCOE.

## HISTORY AND POLITICAL SCIENCE

PROFESSOR THOMAS, ASSISTANT PROFESSOR MURPHY

The courses in this department are designed to form a part of a general cultural education. They are essential to a thorough preparation for law, journalism, politics, ministry, or any other public calling. Course 1 is foundation work and should be taken in the freshman year.

*Requirements for a Major in History*, thirty credit hours. Students expecting to teach history in the secondary schools should complete at least eighteen credit hours in the department. Course 1 should be the basis for this work, and courses 2 or 3a, and 5 should follow.

### COURSES

No.	Title	Credit	Prerequisites
1	Medieval and Modern History.....	6	None
2	History of the United States to 1914.....	6	None
3a	History of the United States, 1776-1845.....	3	†
3b	History of the United States, 1845-1914.....	3	†
5a	History of England to 1485.....	3	1 or 2
5b	History of England since 1485.....	3	1 or 2
7a	French Revolution and Napoleonic Era.....	2	6 hours
7b	Democratic Movement in the Nineteenth Century.....	2	6 hours
*8a	England Under the Tudors and Stuarts.....	3	12 hours
*8b	The British Empire.....	3	12 hours
9a	History of Greece.....	2	6 hours
9b	History of Rome.....	2	6 hours
*13a	The United States, 1763-1789.....	2	12 hours
*13b	The Civil War and Reconstruction.....	2	12 hours
<b>Political Science</b>			
1a	American National Government.....	2	†
1b	American State and Local Governments.....	2	†
2a	National Governments.....	3	†
2b	International Law.....	3	†

†See statement.

\*See page 62.

## HISTORY

1. **MEDIEVAL AND MODERN HISTORY.**—A course designed to give the student a knowledge of the essential contributions of the ancient world to history, of the organization of German society upon the basis of Græco-Roman civilization, and the beginnings of the modern state, the Renaissance, the Reformation, the great religious wars, absolutism, the contest for supremacy on the high seas, the French Revolution, and the democratic movements of the nineteenth and twentieth centuries. Lectures and recitations three hours per week.

PROFESSOR THOMAS.

ASSISTANT PROFESSOR MURPHY.

2. **HISTORY OF THE UNITED STATES TO 1914.**—A course designed for students who expect to teach American history in the secondary schools. Lectures and recitations three hours per week with collateral reading from current periodicals. Credit will not be given in course 2 if course 3 is taken.

ASSISTANT PROFESSOR MURPHY.

3a. **HISTORY OF THE UNITED STATES, 1776-1845.**—After a brief survey of the antecedents of the Revolution, a careful study will be made of the Confederation, the formation of the Constitution, the careers of the Federalist and Republican parties, expansion, the settlement of the West, tariff and financial legislation, special attention being given to the growth of nationality and of democracy. A course designed for students who wish a more intensive course in modern history, or who intend to make history their major. Lectures and recitations three hours per week. This course is open to students who have completed course 1 or four years of high school history.

PROFESSOR THOMAS.

3b. **HISTORY OF THE UNITED STATES, 1845-1916.**—Special attention will be given to the gradual sectionalization of the country over slavery and states' rights, the results of the Civil War and Reconstruction, the industrial and social development of recent times, and the growth of democracy. Lectures and recitations three hours per week, with considerable outside reading.

PROFESSOR THOMAS.

5a. **HISTORY OF ENGLAND TO 1485.**—A general course treating the political, literary, religious, and economic activities of the En-

glish people. The origin and growth of the more important institutions such as kingship, parliament, courts, the church, and the struggle for constitutional government will be discussed. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

5b. HISTORY OF ENGLAND SINCE 1485.—A general course treating of the history of the Renaissance, the Reformation, the struggle for constitutional and democratic government, the industrial revolution, and the founding of the British Empire. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

7a. FRENCH REVOLUTION AND NAPOLEONIC ERA.—France on the eve of the Revolution. French political philosophers; causes and events of the Revolution; and the wars of Napoleon. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR MURPHY.

7b. DEMOCRATIC MOVEMENT IN THE NINETEENTH CENTURY.—A brief survey of Europe in 1815 will be made, after which the development of constitutional government will be considered; the unification of Italy and Germany; and the present condition of world politics. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR MURPHY.

8a. ENGLAND UNDER THE TUDORS AND THE STUARTS.—A study of the political, religious, literary, and economic history of England during these two periods. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR MURPHY.

8b. THE BRITISH EMPIRE.—While a brief survey of the general history of England through the eighteenth and nineteenth centuries will be made, attention will be devoted mainly to a study of England's colonial history and of the forces that have developed the British Empire of today, including an analysis of the present imperial policy. Lectures and recitations three hours per week with collateral reading.

ASSISTANT PROFESSOR MURPHY.

9a. HISTORY OF GREECE.—A course designed to give a more extensive knowledge of the history and institutions of the Greeks. A general knowledge of the subject is presumed. Lectures and recitations two hours per week.

PROFESSOR THOMAS.

9b. HISTORY OF ROME.—A course designed to give a more extensive knowledge of the history and institutions of the Romans. A general knowledge of the subject is presumed. Lectures and recitations two hours per week.

PROFESSOR THOMAS.

13a. THE UNITED STATES, 1763-1789.—A study of the colonies in their relation to the mother country, with special reference to the attempt at imperial taxation. Particular attention will be given to the literature of the period as preparing the colonists for separation. The steps leading to the Declaration of Independence, the failure of the Confederation, and the formation and adoption of the Constitution will be studied in detail. Lectures and recitations two hours per week. (*Not offered in 1917-18.*)

13b. THE CIVIL WAR AND RECONSTRUCTION.—The first part of this course will deal mainly with the events leading up to the war; the second part, with the political, economic, and social phases of the Reconstruction. Lectures and recitations two hours per week. (*Not offered in 1917-18.*)

#### POLITICAL SCIENCE

1a. AMERICAN NATIONAL GOVERNMENT.—A basic course for more advanced work in government. Some attention will be given to the organization of our national government and to the work of the co-ordinate branches, but most emphasis will be laid upon the work of administration. This course is open to all students who have completed not less than six credit hours in history. Lectures and recitations two hours per week.

PROFESSOR THOMAS.

1b. AMERICAN STATE AND LOCAL GOVERNMENTS.—A brief review of the development of American state constitutions, followed by a study of the structure and workings of state governments as organized today and of some of the practical problems now before the states; a brief survey of county and municipal government. Lectures and recitations two hours per week with collateral reading.

PROFESSOR THOMAS.

2a. NATIONAL GOVERNMENTS.—A study and comparison of the structure and powers of the national governments of the United

States and of the leading European nations. Special attention will be given to the place of the federal system in public law. The study will be based on the works of Ogg, Beard, Garner, Burgess, and the constitutions of the different countries. This course is open only to juniors and seniors. Lectures and recitations three hours per week.

PROFESSOR THOMAS.

2b. INTERNATIONAL LAW.—A study of the development of international law and of the usages and principles now considered binding on civilized nations. This course is open only to juniors and seniors. Lectures and recitations three hours per week, with considerable outside reading.

PROFESSOR THOMAS.

## MATHEMATICS AND ASTRONOMY

PROFESSOR DROKE, PROFESSOR HARDING, ASSOCIATE PROFESSOR DUNN, ASSISTANT PROFESSOR MISER

The courses in this department are designed to meet the requirements of (1) students in the courses in engineering, (2) students who expect to teach mathematics, and (3) students who are interested in mathematics for the sake of the subject itself.

*Requirements for a Major in Mathematics*, thirty-four credit hours, including courses 3, 5, 8, and 9 or 20, or their equivalent. Students in engineering may elect, in addition to the prescribed courses, 12a and 20. Students who are preparing to teach mathematics in the secondary schools must complete courses 3, 5, 8, 9, 13b, 14a, and 16. Students who wish only a general knowledge of the subject may take courses 3 and 16.

### COURSES

Mathematics			
No.	Title	Credit	Prerequisites
Cab	Elementary Algebra .....	3 or 6	†
D	Plane Geometry .....	6	†
1a	College Algebra .....	3	†
1b	Solid Geometry .....	3	†
2a	Plane Trigonometry .....	3	†
2b	Analytic Geometry .....	3	2a
3	College Algebra, Solid Geometry, and Plane Trigonometry.....	10	†
4a	Advanced College Algebra .....	3	1a
4b	Advanced Analytic Geometry.....	3	2b



5	Analytic Geometry.....	6 or 8	1a, 1b, 2a, or 3
7	Differential and Integral Calculus.....	6	1a, 1b, 2a, 2b
8	Differential and Integral Calculus.....	8 or 10	3, 5
9	Theory of Equations.....	6	5
10a	Algebra and Plane Trigonometry.....	3	†
11	Spherical Geometry, Analytic and Spherical Trig- onometry.....	6	3
12a	Elementary Mechanics.....	4	4a, 4b, 7
13b	The Teaching of Mathematics.....	3	5
14a	History of Mathematics.....	2	5
*20	Differential Equations.....	6	8
*21	Analytic Geometry of Three Dimensions.....	6	8
*22	Theoretical Mechanics.....	6	8, 12a
*23	Advanced Calculus.....	6	8
*24	Advanced Algebra.....	4	5, 9
*25	Elementary Analysis.....	6	8, 9
*26	Projective Geometry.....	6	8, 9
<b>Astronomy</b>			
16	Elementary Descriptive Astronomy.....	6	None
17	Mathematical Astronomy.....	6	3, 16
*27	Celestial Mechanics.....	6	16, 20

†See statement.

\*See page 62.

Note.—Full credit on courses C and D will be given only when they are taken as a part of the student's first sixty-four hours credit. Half credit only will be given if taken after the student has completed sixty-four hours credit. No credit will be given if taken after the student has completed ninety-six hours credit.

Cab. **ELEMENTARY ALGEBRA.**—A collegiate treatment of advanced high school algebra, designed for students who offer only one unit in algebra for entrance. Three hours per week.

PROFESSOR HARDING.

D. **PLANE GEOMETRY.**—A collegiate treatment of plane geometry, designed for students who offer no geometry for entrance. Three hours per week.

ASSISTANT PROFESSOR MISER.

1a. **COLLEGE ALGEBRA.**—A course in college algebra, designed primarily for students in the courses in engineering who offer at least one and one-half units in algebra for entrance. Three hours per week.

PROFESSOR HARDING.

ASSOCIATE PROFESSOR DUNN.

1b. **SOLID GEOMETRY.**—A course in solid geometry, designed primarily for students in the courses in engineering who offer at least one unit of plane geometry for entrance. Three hours per week.

PROFESSOR HARDING.

ASSOCIATE PROFESSOR DUNN.

2a. PLANE TRIGONOMETRY.—A course in plane trigonometry, designed primarily for students in the courses in engineering who offer at least one unit of plane geometry for entrance. Three hours per week.

ASSOCIATE PROFESSOR DUNN.

ASSISTANT PROFESSOR MISER.

2b. ANALYTIC GEOMETRY.—A course in analytic geometry, designed primarily for students in the courses in engineering.

ASSOCIATE PROFESSOR DUNN.

ASSISTANT PROFESSOR MISER.

3. COLLEGE ALGEBRA, SOLID GEOMETRY, AND PLANE TRIGONOMETRY.—About twelve weeks devoted to each subject, five hours per week. A course designed primarily for students in the College of Arts and Sciences and the College of Education, who offer at least one unit in algebra and one unit in plane geometry for entrance.

PROFESSOR DROKE.

4a. ADVANCED ALGEBRA.—A course in advanced algebra, designed to follow course 1a. Three hours per week.

ASSISTANT PROFESSOR MISER.

4b. ADVANCED ANALYTIC GEOMETRY.—A course in advanced analytic geometry, designed to follow course 2b. Three hours per week.

ASSISTANT PROFESSOR MISER.

5. ANALYTIC GEOMETRY.—A course in analytic geometry, designed for students who have conditional college credit in solid geometry and plane trigonometry from high school. Four hours per week. This course may be elected as a three-hour course by students in the courses in engineering to replace 2b and 4b.

PROFESSOR DROKE.

7. DIFFERENTIAL AND INTEGRAL CALCULUS.—A course in differential and integral calculus, designed for students in the courses in engineering. Three hours per week.

ASSISTANT PROFESSOR MISER.

8. DIFFERENTIAL AND INTEGRAL CALCULUS.—A course in differential and integral calculus, designed for juniors and seniors in the College of Arts and Sciences. Four or five hours per week.

PROFESSOR DROKE.

9. THEORY OF EQUATIONS.—Three hours per week.

PROFESSOR HARDING.

10a. ALGEBRA AND PLANE TRIGONOMETRY.—A course in algebra and plane trigonometry, designed for the students in the courses in agriculture, including a study of factoring, fractional equations, theory of exponents, radicals, and quadratic equations; trigonometric functions, functions of multiple and sub-multiple angles, and solution of triangles. Three hours per week.

ASSOCIATE PROFESSOR DUNN.

11. SPHERICAL GEOMETRY, ANALYTIC AND SPHERICAL TRIGONOMETRY.—Three hours per week.

12a. ELEMENTARY MECHANICS.—A study of the application of mathematics to mechanics; the laws of statics and dynamics, forces, motion of particles, friction, work, and energy. This course is open to all juniors. Four hours per week.

PROFESSOR HARDING.

13b. THE TEACHING OF MATHEMATICS.—A course designed for prospective high school and elementary school teachers. Three hours per week.

14a. HISTORY OF MATHEMATICS.—Recommended to those who are majoring in mathematics. Two hours per week.

20. DIFFERENTIAL EQUATIONS.—Three hours per week.

21. ANALYTIC GEOMETRY OF THREE DIMENSIONS.—Three hours per week.

22. THEORETICAL MECHANICS.—Three hours per week.

23. ADVANCED CALCULUS.—Three hours per week.

24. ADVANCED ALGEBRA.—Two hours per week.

25. ELEMENTARY ANALYSIS.—A study of some of the fundamental conceptions of analysis. Three hours per week.

26. PROJECTIVE GEOMETRY.—Projective forms, the principle of duality, projectives, harmonic sections, conic sections, and algebra of points. Three hours per week.

ASTRONOMY

16. ELEMENTARY DESCRIPTIVE ASTRONOMY.—Lectures and recitations three hours per week, with occasional meetings at night for observation. A knowledge of college mathematics is not necessary.

PROFESSOR HARDING.

17. MATHEMATICAL ASTRONOMY.—Astronomical co-ordinates, parallax, and time determination of latitude. Three hours per week.

PROFESSOR HARDING.

27. CELESTIAL MECHANICS.—Central forces, potential and attraction of bodies, and the problem of two bodies. Three hours per week.

PROFESSOR HARDING.

## MILITARY ART

PROFESSOR ARMISTEAD, MR. WHEELER, MR. HORSTEN

Under the provisions of the Act of Congress, approved July 2, 1862, donating public lands for the establishment of colleges where the leading object shall be the practical instruction of the industrial classes in agriculture and mechanic arts, state institutions which are the beneficiaries of such donations are required to include military art in their course of instruction. An officer of the United States Army is detailed to each such institution to act as professor and head of this department.

The main object of the military instruction given is to qualify college trained men to become officers of infantry, militia, or volunteers. This course of training fits the student for the full duties of citizenship and gives him the normal physical development necessary for his continued well-being through life.

The courses in military art are required of all students in their freshman and sophomore years and may be elected for credit in their junior and senior years.

### RESERVE OFFICERS' TRAINING CORPS

The University of Arkansas has complied with the requirements of the War Department and has been officially designated as one of the civil institutions at which shall be maintained units of the senior division of the Reserve Officers' Training Corps.

Eligibility to membership in this corps is limited to students of institutions in which units of such corps are established, who are citizens of the United States, who are not less than four-

teen years old, and whose bodily condition indicates that they are physically fit to perform military duty, or will be so upon arrival at military age.

When any member of the senior division of the Reserve Officers' Training Corps has completed two academic years of service in that division, has been selected for further training by the president of the institution and by its professor of military art, and has agreed in writing to continue in the corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, he will be furnished, at the expense of the United States, commutation of subsistence during the remainder of his service in the corps. This commutation will amount to about eight dollars per month.

Any graduate of the University who has completed the prescribed course of instruction in military art is eligible for appointment as a temporary second lieutenant in the regular army, for purposes of instruction, for a period of six months, with the allowances now provided by law for that grade, but with pay at the rate of one hundred dollars per month. During this six months of training, the temporary second lieutenant will be attached to a unit of the regular army for duty and training.

A student registered for any one of the courses in military art is not subject to call into either the federal or the state forces, and after graduation can not be called into the military service of the government with a lower rank than that for which he was recommended by the officer detailed at the institution at the time of his graduation.

The corps of cadets is inspected annually by an officer of the United States Army, detailed for that purpose, and the report of such inspection is transmitted to the Chief of Staff for the information of the Secretary of War.

As soon as practicable, each member of the corps will be furnished free of charge with breeches, cap, coat, leggins, shoes, and cap and collar ornaments.

The courses of study given below are prescribed by the War Department and are so arranged as to make use of the instructors in other departments of the University.

## COURSES

No.	Title	Credit	Prerequisites
1a	First Year .....	1	None
1b	First Year .....	1	None
2a	Second Year .....	2	1a, 1b
2b	Second Year .....	2	1a, 1b
3a	Third Year .....	2	2a, 2b
3b	Third Year .....	2	2a, 2b
4a	Fourth Year .....	3	3a, 3b
4b	Fourth Year .....	3	3a, 3b

1a. FIRST YEAR.—Practical instruction in physical drill; infantry drill, including the school of the soldier, the squad, and the company; sighting and aiming drills, gallery practice, and the nomenclature and care of the rifle. Theoretical instruction in target practice; military organization; service of security; map reading; and personal hygiene. Lectures one hour, field work two hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

1b. FIRST YEAR.—Practical instruction in physical drill; infantry drill, including the school of battalion; fire direction and control; ceremonies; bayonet combat; intrenchments; first aid instructions; range and gallery practice. Theoretical instruction, including lectures on the military policy of the United States and the military obligations of citizenship; service of information; conflict; infantry drill regulations, including the school of the company; camp sanitation for small commands. Lectures one hours, field work two hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

2a. SECOND YEAR.—Practical instruction in physical drill; infantry drill, including the school of the battalion; fire direction and control; ceremonies; bayonet combat; intrenchments; first aid instructions; range and gallery practice; collective firing by devices now in use at disciplinary barracks. Theoretical instruction in infantry drill regulations, including the school of the battalion and combats; small arms firing regulations; camp sanitation and camping expedients; lectures on the military policy of the United States and the military obligations of citizenship; and



map reading. Lecture one hour, field work three hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

2b. SECOND YEAR.—Practical instruction in physical drill; infantry drill, including the school of the battalion; fire direction and control; ceremonies; bayonet combat; intrenchments; first aid instructions; gallery practice; signaling; and work on sand-table. Theoretical instruction, including lectures on recent military history; service of information and security by problems in patrolling, advance guard, rear guard, flank guards, trench and mine warfare, orders, messages, camping expedients, and marches and camps. Lectures one hour, field work two hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

3a. THIRD YEAR.—Practical instruction in the duties of a cadet commissioned officer and non-commissioned officer; and military sketching. Theoretical instruction in minor tactics; field orders; map maneuvers; company administration; and lectures on recent military history. Lectures one hour, field work four hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

3b. THIRD YEAR.—Practical instruction in the duties of a cadet commissioned officer and non-commissioned officer; and military sketching. Theoretical instruction in minor tactics; map maneuvers; property accountability and methods of obtaining supplies and equipment; and lectures on the elements of international law. Lecture one hour, field work four hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

4a. FOURTH YEAR.—Practical instruction in the duties of a cadet commissioned officer and non-commissioned officer; and mili-

tary sketching. Theoretical instruction in tactical problems, with small forces, and with all arms combined; map maneuvers; court martial proceedings; lectures on diplomacy and international law, and general principles of strategy, and the psychology of war. Lectures one hour, field work four hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

4b. FOURTH YEAR.—Practical instruction in the duties of a cadet commissioned officer and non-commissioned officer; and military sketching. Theoretical instructions in tactical problems; map maneuvers; the rifle in war; and lectures on military history and military policy. Lectures one hour, field work four hours per week.

PROFESSOR ARMISTEAD.

MR. WHEELER.

MR. HORSTEN.

## PHYSICAL EDUCATION (FOR WOMEN)

MISS MILLER

The purpose of the work in this department is to improve the standard of the general health and to increase the physical efficiency of the young women. A physical examination is made of each student upon entrance and at such intervals through the year as may seem necessary.

The work is conducted in the indoor gymnasium and during suitable weather on outdoor courts. The uniform consists of a white middy-blouse, black serge bloomers, and gymnasium shoes.

The courses in physical education are required of all women students during their freshman and sophomore years. A maximum of eight credit hours may be used toward graduation.

### COURSES

No.	Title	Credit	Prerequisites
1	Elementary Physical Education.....	2	Required
2	Intermediate Physical Education .....	2	1
3	Advanced Gymnastics .....	2	1 and 2
4	Advanced Dancing .....	2	1 and 2
5	The Teaching of Physical Education .....	2	1 and 2

1. **ELEMENTARY PHYSICAL EDUCATION.**—General gymnastic work, games, and lectures on personal hygiene. Two hours per week.

MISS MILLER.

2. **INTERMEDIATE PHYSICAL EDUCATION.**—(1). General gymnastic work, one hour per week; (2) basketball, indoor baseball, and tennis, one hour per week; (3) æsthetic and folk dancing, one hour per week. Students may elect either (1) and (2), or (1) and (3).

MISS MILLER.

3. **ADVANCED GYMNASTICS.**—Advanced gymnastic work; fencing, field sports, and outdoor games. Two hours per week.

MISS MILLER.

4. **ADVANCED DANCING.**—Two hours per week.

MISS MILLER.

5. **THE TEACHING OF PHYSICAL EDUCATION.**—Theoretical and practical work, designed for prospective public school teachers. Two hours per week.

MISS MILLER.

## PHYSICS

PROFESSOR RIPLEY, MR. BROWN

The courses in this department are designed (1) for students in the courses in engineering, agriculture, chemistry, and home economics, as a part of the required curricula, and (2) for students in other courses who desire a general knowledge of the subject or who wish to prepare for the study of law or medicine, or for teaching or graduate work.

*Requirements for a Major in Physics*, thirty-four credit hours, including courses 1 and 11 or 5 and 51, 2, 21, 7a, 8a, 9a, 10a, and 12. Students who are preparing to teach physics in the secondary schools should complete, as a minimum requirement, course 1, 11, 2, 21, and 11.

## COURSES

No.	Title	Credit	Prerequisites
1	General Physics .....	6	Math. 2a
11	General Physics Laboratory .....	2	†
2	Advanced Physics .....	6	1 or 5
21	Advanced Physics Laboratory .....	2	†
4	History of Physics.....	4	2
5	Elementary Physics.....	6	None
51	Elementary Physics Laboratory.....	2	†
6	Household Physics .....	6	None
61	Household Physics Laboratory .....	2	†
*7a, 7b	Heat .....	3	2, 21
*8a, 8b	Electrical Measurements .....	2	2, 21
*9a, 9b	Light .....	2	7a, or 8a
*10ab	Mathematical Physics.....	3 or 6	2, 5, Math. 7
11	The Teaching of Physics.....	4	2, 21
12	Recent Advances in Physics.....	6	9a

†See statement.

\*See page 62.

1. GENERAL PHYSICS.—A general course in physics, including a study of heat, magnetism, electricity, and light. Lectures and recitations three hours per week. This course must be accompanied by course 11.

PROFESSOR RIPLEY.

MR. BROWN.

11. GENERAL PHYSICS LABORATORY.—Laboratory exercises to accompany course 1, two hours per week.

PROFESSOR RIPLEY.

MR. BROWN.

2. ADVANCED GENERAL PHYSICS.—An advanced course dealing with the theory of physics, the development of formulæ, and

the application of formulæ and laws to the solving of physical problems. This course must be accompanied by course 2l.

MR. BROWN.

2l. ADVANCED PHYSICS LABORATORY.—Exercises in the determination of moment of inertia, tension, center of mass, coefficient of friction, Young's modulus, thermal expansion, heats of fusion and vaporization, capacity, high and low potentials, and photometry. Laboratory exercises to accompany course 2, two hours per week.

PROFESSOR RIPLEY.

4. HISTORY OF PHYSICS.—A critical and historical account of the development of physics and a study of how the general principles have been ascertained, from what sources they take their origin and how far they can be regarded as permanent acquisitions today. Lectures and recitations two hours per week.

PROFESSOR RIPLEY.

5. ELEMENTARY PHYSICS.—A non-mathematical course in elementary physics designed for students who desire to secure a general knowledge of the subject and its application to everyday life. Lectures and recitations three hours per week.

PROFESSOR RIPLEY.

MR. BROWN.

5l. ELEMENTARY PHYSICS LABORATORY.—Laboratory exercises to accompany course 5, two hours per week.

MR. BROWN.

6. HOUSEHOLD PHYSICS.—Lectures and recitations three hours per week. This course must be accompanied by course 6l.

PROFESSOR RIPLEY.

6l. HOUSEHOLD PHYSICS LABORATORY.—Laboratory exercises to accompany course 6, two hours per week.

MR. BROWN.

7a, 7b. HEAT.—Lectures and recitations one hour, laboratory practice four hours per week.

PROFESSOR RIPLEY.

8a, 8b. ELECTRICAL MEASUREMENTS.—Calibration of instruments, measurements of resistance of conductors and dielectrics, measurements of current, electromotive force, inductance, and

capacity. Lecture and recitations one hour, laboratory work four hours per week.

MR. BROWN.

9a, 9b. LIGHT.—A treatment of the modern theory of light, with a consideration of recent advances in this branch of physics, lectures and recitations two hours per week; laboratory work in spectroscopy, the use of the photometer, optical bench, interferometer, and optical pyrometer, four hours per week.

PROFESSOR RIPLEY.

10a. MATHEMATICAL PHYSICS, KINETIC THEORY OF GASES.—A study of the application of this theory to diffusion and pressure of gases, to viscosity of liquids and gases, and to temperature and specific heats of gases and metals. The past fruitfulness and future promise of the theory in invention and discovery will be discussed. Lectures and recitations three hours per week.

MR. BROWN.

10b. MATHEMATICAL PHYSICS, ELECTRON THEORY.—A study of the application of this theory to the phenomena of radio-activity, ultra-violet light, gaseous ionization, and metallic conduction; a discussion of the theories of atomic constitution and their practical bearings. Lectures and recitations three hours per week.

MR. BROWN.

11. THE TEACHING OF PHYSICS.—Discussions of methods of teaching physics, text-books and laboratory manuals, with reports on assigned topics. A course designed for prospective high school teachers. Two hours per week.

PROFESSOR RIPLEY.

12. RECENT ADVANCES IN PHYSICAL SCIENCE.—Lectures and recitations on the electron theory, conduction of electricity through gasses, radio-activity, and similar topics of current interest, three hours per week.

PROFESSOR RIPLEY.



## ROMANCE LANGUAGES

PROFESSOR MARINONI, MISS HARGIS

The courses offered in this department are intended to give students an intimate acquaintance with the languages spoken in the principal Latin countries and to stimulate knowledge and appreciation of the literary attainments of the Latin people. In the higher courses emphasis is laid especially on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted in the language which forms the object of study.

*Requirements for a Major in Romance Languages*, thirty semester hours, including French 1, 2, 3, 4, and 5; Spanish 1 and 2 and Italian 1; or Spanish 1 and Italian 1 and 2. Major students in the Department of Romance Languages, upon completing the required work, are expected to have a fair speaking knowledge of at least one language. They are therefore urged to take in their third year of work the conversation courses offered by the department. Students preparing to teach either French or Spanish in the secondary schools should complete at least twenty-four credit hours in the language chosen, and in addition should include a course in teaching modern languages. Such students are strongly urged to do at least one year of practice teaching in the Training High School.

## COURSES

French			
No.	Title	Credit	Prerequisites
1	Elementary French .....	10	None
2	French Prose and Poetry.....	6	1
3	French Conversation .....	2	1
*4	French Literature of the Seventeenth Century....	6	2
*5	French Literature of the Nineteenth Century....	6	2
*6	Modern French Poetry .....	2	†
*7	French Drama .....	2	†
*8	Historical French Grammar.....	2	†
*9	Balzac .....	4	†
Italian			
1	Elementary Italian .....	6	None
2	Advanced Italian .....	6	1
Spanish			
A	Elementary Spanish .....	6	†
1	Elementary Spanish .....	10	None
2	Advanced Spanish .....	6	1
*3	Spanish Literature .....	6	2
4	Conversation and Composition.....	4	2

† See statement.

\* See page 62.

## FRENCH

1. **ELEMENTARY FRENCH.**—Grammar, reading, recitation, and composition. Pronunciation is carefully taught and oral drill insisted upon. Five hours per week.

MISS HARGIS.

2. **FRENCH PROSE AND POETRY.**—Composition, sight reading, syntax, and conversation; reading of representative works of modern French authors. Three hours per week.

MISS HARGIS.

3. **FRENCH CONVERSATION.**—Three hours per week.

MISS HARGIS.

4. **FRENCH LITERATURE OF THE SEVENTEENTH CENTURY.**—A general view of the classic periods of French literature. The most important literary productions of the century are read and analyzed. Lectures and recitations in French, with a considerable amount of outside reading. Three hours per week.

PROFESSOR MARINONI.

5. **FRENCH LITERATURE OF THE NINETEENTH CENTURY.**—Lectures and recitations in French, with readings from the leading authors of the Romantic period. Three hours per week.

PROFESSOR MARINONI.

6. **MODERN FRENCH POETRY.**—A study of the evolution of French poetry from 1850 to the present time; new tendencies in poetry and the reaction against Romanticism, as shown in the works of Leconte de Lisle and other Parnassians. Lectures and recitations one hour per week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI.

7. **FRENCH DRAMA.**—A course dealing with the evolution of the French drama from its origin to the present day. Lectures and recitations in French, with some outside reading. One hour per week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI.

8. **HISTORICAL FRENCH GRAMMAR.**—Lectures and recitations one hour per week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI.

9. BALZAC.—A thorough study of the life and works of Balzac. Lectures and recitations two hours per week. The permission of the instructor must be secured before registering for this course.

PROFESSOR MARINONI.

#### ITALIAN

1. ELEMENTARY ITALIAN.—Grammar, composition, dictation, and conversation, three hours per week.

PROFESSOR MARINONI.

2. ADVANCED ITALIAN.—Syntax, composition, conversation, and reading of representative modern works. The second semester will be devoted to the study of Dante's *Inferno*. Three hours per week.

PROFESSOR MARINONI.

#### SPANISH

A. ELEMENTARY SPANISH.—A course in elementary Spanish, open only to students in the courses in agriculture and engineering. Grammar, composition, dictation, conversation, and reading of easy texts, three hours per week.

PROFESSOR MARINONI.

1. ELEMENTARY SPANISH.—Grammar, composition, dictation, conversation, and reading of easy texts, five hours per week.

PROFESSOR MARINONI.

2. ADVANCED SPANISH.—Syntax, composition, conversation, and reading of representative modern works. Class work is conducted largely in Spanish. Three hours per week.

PROFESSOR MARINONI.

3. SPANISH LITERATURE.—Lectures, reports, and reading of standard works. Class work is conducted in Spanish. Three hours per week.

PROFESSOR MARINONI.

4. COMPOSITION AND CONVERSATION.—Two hours per week.

PROFESSOR MARINONI.

## COLLEGE OF EDUCATION

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The purpose of the College of Education is to bring together and correlate the forces of the University which contribute to the preparation of educational leaders in teaching and supervision, whether rural, elementary, secondary, or executive.

The curriculum will be based upon the assumption that teachers should have, first of all, and fundamental to all other preparation, a broad and liberal education; second, that they should be the masters of some special subject which they expect to teach; and, third, that this training should be supplemented by professional courses designed to give them a knowledge of the minds of the pupils to be taught and the problems to be met, with a thorough course in practice teaching under experienced critic teachers.

### ADMISSION

For a statement of the entrance requirements and a description of the subjects accepted for entrance see page 30.

### COURSES OF STUDY

The College of Education offers a four-year course leading to a degree of *Bachelor of Science in Education* (B. S. E.), a graduate course leading to the degree of *Master of Science* (M. S.), and special two- and three-year courses leading to a teacher's certificate.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION

The candidate must meet the entrance, residence, and registration requirements, and must complete satisfactorily at least one hundred thirty-six credit hours in approved courses, with the following restrictions:

1. Prescribed courses as follows: English 1, six hours; Education, thirty-two hours, including courses 1a, 20b, 22a, 23b, and 24; Military Art, six hours (for men), or Physical Education, four hours (for women).

2. Elective courses to be chosen from the following groups with the restrictions noted below:

Group 1: English, French, German, Greek, Italian, Latin, and Spanish.

Group 2: Astronomy, Biology, Chemistry, Geology, Mathematics, and Physics.

Group 3: Economics, Education, History, Political Science, Philosophy, and Sociology.

Group 4: Agriculture, Engineering, Home Economics, Fine Arts, Law, and Medicine.

a. The candidate may elect not more than forty hours from any one subject and not more than eighty hours from any one group, except by special permission of the dean of the college.

b. The candidate must select, not earlier than the beginning of his sophomore year and not later than the beginning of his junior year, one major subject in which he must complete at least thirty credit hours and two minor subjects in which he must complete at least eighteen and twelve credit hours, respectively, subject to the approval of the head of the department and the dean of the college. The major subject must be chosen from group 1, 2, or 3, except where a student definitely announces his intention to teach subject matter acquired largely in agriculture, engineering, or home economics, in which case it may be chosen from group 4. A description of the major requirements of each department will be found under the departmental statements.

c. The candidate must elect not less than eighteen hours from each of the first three groups, except where he chooses his major from group 4.

d. The candidate may elect not more than eighteen hours from group 4, except where he chooses his major in that group.

e. The candidate must conform as closely as possible to the following schedule in the distribution of his work:

### *Freshman Year*

First Semester		Credit Hours	Second Semester		Credit Hours
English 1.....	1	3	English 1.....	1	3
Education 1a.....	1a	3	Education 20b.....	20b	3
Education 22a.....	22a	2	Education 23b.....	23b	2
Military Art 1 (or).....	1 (or)	1	Military Art 1 (or).....	1 (or)	1
Physical Education 1.....	1	1	Physical Education .....		1
Elective .....		8	Elective .....		8
		<hr/> 17			<hr/> 17

<i>Sophomore Year</i>					
First Semester			Second Semester		
	Art 2 (or).....	Credit Hours		Art 2 (or).....	Credit Hours
Military Physical Elective .....	Education 2.....	2 or 1	Military Physical Elective .....	Education 2.....	2 or 16
		15 or 16			15 or 16
		17			17
<i>Junior Year</i>					
First Semester			Second Semester		
		Credit Hours			Credit Hours
*Elective .....		17	*Elective .....		17
<i>Senior Year</i>					
First Semester			Second Semester		
		Credit Hours			Credit Hours
Education 24.....		4	Education 24.....		4
*Elective .....		13	*Elective .....		13
		17			17

\*To be chosen with the advice and consent of the candidate's major professor, so as to include not less than six credit hours in education and so as to meet the prescribed group requirements, outlined above.

### REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

The degree of *Master of Science* is granted for graduate work based on a four-year undergraduate course and a degree of either *Bachelor of Arts* or *Bachelor of Science in Education* from this institution or other institution of equal standing. Before a student can become a candidate for the degree, however, his petition for admission to graduate standing must receive the approval of the Senate Committee on Graduate Study and the dean of the college.

1. The minimum time in which a candidate may be permitted to complete the degree is one academic year. In individual cases, where the committee deems it necessary, more than one year may be required.

2. The candidate is required to complete one major subject and not more than two minor subjects in closely related courses. The major subject, occupying with the thesis sixteen credit hours, must be one in which the candidate has received credit in his undergraduate course for at least twenty-four credit hours. The minor subjects, occupying together twelve credit hours, must be ones in which he has received credit in his undergraduate course for at least twelve credit hours each. The choice of the candidate's major and minors is subject to



the approval of the committee, the dean of the college, and the major professor.

3. Twenty-eight of the thirty-two hours required of the candidate must be regular class-room work. Candidates who are graduates of this University may pursue one-half of the required work by correspondence, provided that their undergraduate records are satisfactory to the committee and to the dean of the college.

4. A student may be admitted to graduate standing without becoming a candidate for a degree by permission of the committee and the dean of the college.

### *REQUIREMENTS FOR A TEACHER'S CERTIFICATE*

The teacher's certificate is granted in accordance with the law of the State of Arkansas, which reads:

"That the diploma from the teachers' training department of the University of Arkansas shall be equivalent to a teacher's professional license, which shall entitle the holder to teach in any public school in the State of Arkansas for a period of six years from and after the date of issue. At the expiration of said period such diploma may be converted into a life certificate, provided that the character of the work done by the holder thereof, and his or her moral character, shall meet with the approval of the Superintendent of Public Instruction of the State of Arkansas."

This certificate is granted to students in the College of Education, and to students in the College of Arts and Sciences who take their major in Education, upon completion of one of the following courses: (I) the two-year regular course; (II) the two-year special course in manual training; (III) or the three-year special course in home economics.

### **I**

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily at least sixty-eight credit hours in approved courses as prescribed in the following course of study:

*Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Education 1a.....	3	Education 20b.....	3
Education 22a.....	2	Education 23b.....	2
Military Art 1 (or).....		Military Art 1 (or).....	
Physical Education 1.....	1	Physical Education 1.....	1
*Elective .....	8	Elective .....	8
	<hr/> 17		<hr/> 17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Education 24.....	4	Education 24.....	4
Military Art 2 (or).....		Military Art 2 (or).....	
Physical Education 2.....	2 or 1	Physical Education 2.....	2 or 1
*Elective .....	11 or 12	*Elective .....	11 or 12
	<hr/> 17		<hr/> 17

\*To be chosen with the advice and consent of the department in which the candidate wishes to secure a recommendation to teach, so as to include not less than six credit hours in education.

## II

The candidate must meet the entrance, residence, and registration requirements and must complete at least sixty-eight credit hours as outlined in the following course of study:

*Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Education 1a.....	3	Education 20b.....	3
Education 22a.....	2	Education 23b.....	2
Mathematics S.....	5	Mathematics S.....	5
Mechanical Engineering 3a.....	4	Mechanical Engineering Cb.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Military Art 1.....	1	Military Art 1.....	1
	<hr/> 17		<hr/> 17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Education 24.....	4	Education 24.....	4
Mechanical Engineering Ba.....	3	Mechanical Engineering Db.....	3
Mechanical Engineering 7.....	2	Mechanical Engineering 7.....	2
Military Art 2.....	2	Military Art 2.....	2
Education (elective).....	3	Education (elective).....	3
	<hr/> 17		<hr/> 17

## III

The candidate must meet the entrance, residence, and registration requirements and must complete at least one hundred

two credit hours in approved courses as prescribed in the following course of study:

*Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Physics 6 and 6L.....	4	Physics 6 and 6L.....	4
Home Economics 30 .....	3	Home Economics 30 .....	3
Art 2a.....	2	Home Economics 34b.....	2
Physical Education 1 .....	1	Physical Education 1.....	1
	<hr/> 17		<hr/> 17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Education 1a .....	3	Education 20b.....	3
Education 22a.....	2	Education 23b.....	2
Home Economics 10.....	3	Home Economics 10.....	3
Home Economics 31.....	3	Home Economics 31.....	3
Bacteriology 2a.....	5	Elective .....	1
Physical Education 2.....	1	Chemistry 10b .....	4
	<hr/> 17	Physical Education 2.....	1
			<hr/> 17

*Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Education 24 .....	4	Education 24.....	4
Home Economics 1.....	3	Home Economics 1.....	3
Home Economics 20.....	3	Home Economics 20.....	3
Home Economics 11.....	3	Home Economics 11.....	3
Biology 8 .....	4	Biology 8.....	4
	<hr/> 17		<hr/> 17

## DEPARTMENTAL STATEMENTS

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SYMBOLS

The suffix *a* following the numeral indicates first semester courses; the suffix *b*, second semester courses. A repetition of the two (e. g. 7a, 7b) indicates courses offered either semester. A combination of the two (e. g. 7ab) indicates year courses in which credit will be allowed for one semester; in courses not so designated the second semester must be completed before credit will be allowed for the first.

## CREDIT HOURS

The number of credit hours allowed in each course is identical with the number of hours of lecture or recitation hours per week through the semester; in laboratory, shop, or field work two to three hours is considered as equivalent to one hour of lecture or recitation.

## EDUCATION

PROFESSOR JEWELL, PROFESSOR TORREYSON, ASSISTANT PROFESSOR GRANT, ASSISTANT PROFESSOR JORDAN, MRS. SIMPSON, MISS JENKS, MRS. SEARS

*Requirements for a Major in Education*, thirty-two credit hours, including courses 1a (or b), 20b, 22a, 23b, and 24.

Course 1a (or b) should be taken as a preparation for all other courses in the department. Students preparing to teach should complete, in addition, courses 3a (or b), 6a (or b), or 7a (or b), 21a (or b), and 27a. No student will be recommended for a teaching position in a high school who has not completed course 8a (or b). No student will be recommended for a position in school supervision who has not completed course 27a. As a preparation for the ministry, courses 6a (or b), 7a (or b), 8a (or b), and 10a (or b) are recommended; for the study of law, courses 7a (or b), and 30a; and for the study of medicine, course 9a (or b).

COURSES			
No.	Title	Credits	Prerequisites
1a, 1b	General Psychology.....	3	None
2a	Advanced Psychology.....	3	†
3a, 3b	Educational Psychology.....	3	1a or 2a
*6a, 6b	Genetic Psychology.....	3	1a or 2a
*7a, 7b	Social Psychology.....	3	1a or 2a
*8a, 8b	Psychology of Adolescence.....	3	1a or 2a
*9a, 9b	Abnormal Psychology.....	3	1a or 2a
*10a, 10b	Psychology of Religion.....	3	1a or 2a
*20b	History of Education.....	3	None
*21a, 21b	Philosophy of Education.....	2	1a or 2a, 20b, 22a, 23b
22a	The Teaching Process.....	2	None
23b	Observation and the Curriculum.....	2	22a
24	Practice Teaching.....	8	1a or 2a, 20b, 22a, 23b
25a	The Modern High School.....	3	20b, 22a, 23b
26	The Elementary School.....	4	20b, 22a, 23b
*27a	School Management.....	3	20b
*28a, 28b	Comparative School Systems ..	3	20b
*29a, 29b	School Hygiene.....	2	None
*30a	Logic.....	2	1a or 2a
*31b	Ethics.....	2	1a or 2a
40b	Vocational Guidance for Girls.....	2	None
50	Public School Music.....	3	None
54a, 54b	Advanced Teaching.....	4	24, †
57b	Rural School Management.....	3	None

†See statement.

\*See page 62.

1a, 1b. **GENERAL PSYCHOLOGY.**—An introduction to the field of general psychology, dealing with the simpler aspects of mental life. The course is designed to ground the student in the fundamentals of the subject and to enable him to acquire a right attitude toward human behavior in general. Lectures and recitations three hours per week. **PROFESSOR JEWELL.**

**ASSISTANT PROFESSOR JORDAN.**

2a. **ADVANCED PSYCHOLOGY.**—A scientific treatment of advanced psychology, designed especially for students who have completed a satisfactory course in high school psychology. Emphasis is placed on the study of the general principles of the thought process. Lectures and recitations three hours per week.

**ASSISTANT PROFESSOR JORDAN.**

3a, 3b. **EDUCATIONAL PSYCHOLOGY.**—A consideration of the following topics of vital importance to the teacher; sources of interest, instincts, habits, moral training, memory, thinking, attention, imagination, and "transfer of training." Lectures and recitations three hours per week.

**ASSISTANT PROFESSOR JORDAN.**

6a, 6b. **GENETIC PSYCHOLOGY.**—An intensive study of the de-

velopment of the mind from childhood to adolescence with a consideration of the arguments for and against the recapitulation theory. In studying the principles of child psychology, a careful interpretation is made of influences in their bearing upon education in the home and in the school. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

7a, 7b. SOCIAL PSYCHOLOGY.—A study of public opinion, custom, imitation, psychology of leadership, conflict, discussion, compromise, mob mind, social will, communication and the crowd. This course will give an insight into present social problems by showing how consciousness has been developed in home, school, neighborhood, and society. Lectures and recitations three hours per week. ASSISTANT PROFESSOR JORDAN.

8a, 8b. PSYCHOLOGY OF ADOLESCENCE.—A study of the important physical, mental, and moral changes which are natural to adolescence, of special interest to all who have to deal with boys and girls of high school age. Attention will be given to laying the foundation for the pedagogy of secondary instruction. Lectures and recitations three hours per week.

PROFESSOR JEWELL.

9a, 9b. ABNORMAL PSYCHOLOGY.—A treatment of the psychological conditions and mental phenomena of sleep, dreams, aphasia, insanity, and illusion. Lectures, discussions, and reports three hours per week.

PROFESSOR JEWELL.

10a, 10b. PSYCHOLOGY OF RELIGION.—This course is presented from the standpoint of the growth of religious consciousness in the individual rather than in the race. The treatment is twofold. After a thorough consideration of the various phases of conversion, the same topics are studied again as elements of a spontaneous religious development. Lectures and recitations three hours per week. (*Not offered in 1917-18.*)

20b. HISTORY OF EDUCATION.—Educational tendencies rather than men will be the content of this course. Stress will be laid upon the connection between educational theory and actual school work in its historical development. Lectures and recitations three hours per week.

PROFESSOR JEWELL.

PROFESSOR TORREYSON.

ASSISTANT PROFESSOR JORDAN.

21a, 21b. PHILOSOPHY OF EDUCATION.—Education considered



from the standpoint of (1) biology, (2) neurology, (3) psychology, (4) anthropology, and (5) sociology; representative topics: instinct, heredity, habit, culture epochs, individual differences, imitation, suggestion, training and memory, imagination, emotions, will, senses, motor activities and moral nature, formal discipline, educational values, social education. Lectures and recitations two hours per week.

PROFESSOR JEWELL.

22a. THE TEACHING PROCESS.—This course deals with the scientific principles underlying teaching rather than with details of device and method. A careful study of this course should do much toward eliminating the waste of time and energy often involved in the work of the school. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR GRANT.

23b. OBSERVATION AND THE CURRICULUM.—Observations and discussions of recitations in elementary and secondary school work with considerable attention given to working out a suitable course of study. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR GRANT.

24. PRACTICE TEACHING.—Daily teaching for one period in the Training School in practical application of the principles of instruction. Teachers' meeting one hour per week.

ASSISTANT PROFESSOR GRANT.

MRS. SIMPSON.

MISS JENKS.

MRS. SEARS.

25a. THE MODERN HIGH SCHOOL.—A course dealing with the high school; its functions; organization, management, and equipment; the principal; the teacher; the pupil; the class exercise; social life; the high school and the community; and present problems. For prospective high school teachers. Text-book, lectures, and references, three hours per week.

PROFESSOR TORREYSON.

ASSISTANT PROFESSOR JORDAN.

26 THE ELEMENTARY SCHOOL.—Topics similar to those treated in course 25a will be discussed in their relation to the elementary school. A course designed for prospective elementary school teachers. Text-book, lectures, and references, two hours per week.

ASSISTANT PROFESSOR GRANT.

MRS. SIMPSON.

27a. SCHOOL MANAGEMENT.—A study of the qualifications of the teacher, grading and promotion, recitation, discipline, study and preparation, school incentive, and the school and the community, designed for prospective grade school teachers. Text-book, lectures, and references, three hours per week. (*Not offered in 1917-18.*)

28a, 28b. COMPARATIVE SCHOOL SYSTEMS.—A study of the outstanding features of the school systems of France, Germany, England, and the United States, appealing to those interested in a better supervision of schools. These countries are seeking efficiency in distinctly different ways and are attempting to develop different traits in their citizens. Text-book, lectures, and references, three hours per week.

PROFESSOR JEWELL.

29a, 29b. SCHOOL HYGIENE.—Problems of school hygiene, including heating, lighting, and ventilating, school diseases and medical inspection of schools, and hygiene of various school activities. Text-book, lectures, and references, two hours per week.

PROFESSOR JEWELL.

30a. LOGIC.—The application of logic to the practical problems of everyday life, including a careful study of inductive and deductive reasoning, with special reference to argumentation and debate. This course is designed to give a foundation for future philosophical study. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR JORDAN.

31b. ETHICS.—This course, after some attention to the growth of ethics in history, will confine itself largely to helping the student acquire better methods of estimating and controlling conduct. Studies will be made of the moral problems that have confronted people from primitive times to the present, and of comparisons between individual and group morality. Lectures and recitations two hours per week.

ASSISTANT PROFESSOR JORDAN.

40b. VOCATIONAL GUIDANCE FOR GIRLS.—A study of woman's work in the world in order to enable girls to discover and develop their powers for service and to help them to make the most of their abilities and opportunities. This course should

enable young teachers to help the boys and girls with whom they come into contact to make an intelligent choice of their life work. Lectures and recitations two hours per week.

MRS. SIMPSON.

50. PUBLIC SCHOOL MUSIC.—A course preparatory to teaching music in the public schools. Two meetings each week are given to sight reading and one to a careful study of the methods of teaching the subject to children.

PROFESSOR TOVEY.

MRS. BATEMAN.

MISS JENKS.

54a, 54b. ADVANCED TEACHING.—An additional semester of practice teaching, offered for those advanced students who desire to gain greater proficiency in the technique of class room procedure and management. This course should not be elected without the advice of the head of the department.

ASSISTANT PROFESSOR GRANT.

57b. RURAL SCHOOL MANAGEMENT.—This course is designed to make both the aim and the methods of conducting a rural school very definite. It is designed especially for those rural teachers who have had little opportunity to see better schools than their own. The enrichment of the life of the country child will be kept in mind, and topics such as plays and games, study program, agriculture in the school, and the problems relating especially to the rural school, will be considered. Text-book, lectures, and references, three hours per week. (*Not offered in 1917-18.*)

## COLLEGE OF ENGINEERING

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The purpose of the courses in this college is to prepare young men for the profession of engineering. The value of the training that is acquired in a university course is recognized by railway officials, manufacturers, and municipal, state, and federal authorities. The demand in industrial and engineering fields throughout the country is for college graduates.

The graduates of the College of Engineering of the University of Arkansas are scattered over the entire world, occupying positions of trust in foreign lands, in the service of the United States government, in large manufacturing, and in state and municipal service, or building for themselves reputations as professional engineers.

### ADMISSION

For a detailed statement of the entrance requirements and a description of the subjects accepted for entrance, see page 31.

### COURSES OF STUDY

The College of Engineering offers through its various departments four-year courses leading to the degree of *Bachelor of Chemical Engineering* (B. Ch. E.), *Bachelor of Civil Engineering* (B. C. E.), *Bachelor of Civil Engineering in Highways* (B. C. E. in Highways), *Bachelor of Electrical Engineering* (B. E. E.), *Bachelor of Mechanical Engineering* (B. M. E.), and *Bachelor of Mining Engineering* (B. Mi. E.); graduate and professional courses leading to the degree of *Chemical Engineer* (Ch. E.), *Civil Engineer* (C. E.), *Electrical Engineer* (E. E.), and *Mechanical Engineer* (M. E.); and special two-year courses in civil, electrical, and mechanical engineering leading to a certificate.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF CHEMICAL ENGINEERING

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

### *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Military Art 1.....	1	Military Art 1.....	1
	18		18

### *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 5a.....	3	Chemistry 6b.....	3
Physics I and II.....	4	Physics I and II.....	4
Mathematics 4a.....	3	*Elective.....	1
Mathematics 7.....	3	Mathematics 7.....	3
Mechanical Engineering 7.....	2	Mechanical Engineering 7.....	2
Electrical Engineering 26.....	2	Electrical Engineering 26.....	2
Military Art 2.....	2	Military Art 2.....	2
	19		17

### *Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 4.....	4	Chemistry 4.....	4
Chemistry 7a.....	3	Chemistry 7b.....	3
German.....	3	German.....	3
Mechanical Engineering 8a.....	4	Mechanical Engineering 9b.....	4
Electrical Engineering 5.....	2	Electrical Engineering 5.....	2
*Elective.....	2	*Elective.....	2
	18		18

### *Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Chemistry 7a.....	3	Chemistry 7b.....	3
Chemistry 14a.....	3	Chemistry 12b.....	3
Chemistry 13.....	3	Chemistry 13.....	3
German.....	3	German.....	3
Mechanical Engineering 19a.....	3	Civil Engineering 26b.....	2
Chemistry 15.....	1	Chemistry 15.....	1
*Elective.....	2	*Elective.....	3
	18		18

\*To be chosen with the advice and consent of the candidate's major professor.

# REQUIREMENTS FOR THE DEGREE OF BACHELOR OF CIVIL ENGINEERING

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

## *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Military Art 1.....	1	Military Art 1.....	1
	<hr/> 18		<hr/> 18

## *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 4a.....	3	Civil Engineering 3b.....	2
Mathematics 7.....	3	Mathematics 7.....	3
Civil Engineering 6.....	2	Civil Engineering 6.....	2
Civil Engineering 7.....	1	Civil Engineering 7.....	1
Mechanical Engineering 7.....	2	Mechanical Engineering 7.....	2
Physics 1 and 1l.....	4	Physics 1 and 1l.....	4
Military Art 2.....	2	Civil Engineering 5b.....	2
	<hr/> 17	Military Art 2.....	2
			<hr/> 18

## *Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mechanical Engineering 8a.....	4	Mechanical Engineering 9b.....	4
Civil Engineering 10.....	2	Civil Engineering 10.....	2
Civil Engineering 11.....	2	Civil Engineering 11.....	2
Civil Engineering 13.....	3	Civil Engineering 13.....	3
Geology 8a.....	2	Civil Engineering 26b.....	2
*Elective .....	5	*Elective .....	5
	<hr/> 18		<hr/> 18

## *Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Civil Engineering 16.....	4	Civil Engineering 16.....	3
Civil Engineering 17.....	2	Civil Engineering 17.....	2
Civil Engineering 18a.....	2	Civil Engineering 18b.....	3
Civil Engineering 20a.....	3	Civil Engineering 20b.....	3
Civil Engineering 19a.....	2	Civil Engineering 29b.....	2
Civil Engineering 25.....	1	Civil Engineering 21.....	2
*Elective .....	4	Civil Engineering 25.....	1
	<hr/> 18	*Elective .....	3
			<hr/> 19

\*To be chosen with the advice and consent of the candidate's major professor.



## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF CIVIL ENGINEERING IN HIGHWAYS

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

### Freshman Year

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Military Art 1.....	1	Military Art 1.....	1
	18		18

### Sophomore Year

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 4a.....	3	Civil Engineering 5b.....	2
Mathematics 7.....	3	Mathematics 7.....	3
Civil Engineering 6.....	2	Civil Engineering 6.....	2
Civil Engineering 7.....	1	Civil Engineering 7.....	1
Chemistry 5a.....	3	Chemistry 6b.....	3
Physics 1 and 1I.....	4	Physics 1 and 1I.....	4
Military Art 2.....	2	Military Art 2.....	2
	18	*Elective .....	1
	18		18

### Junior Year

First Semester	Credit Hours	Second Semester	Credit Hours
Mechanical Engineering 8a.....	4	Mechanical Engineering 9b.....	4
Civil Engineering 10a.....	2	Civil Engineering 22b.....	3
Civil Engineering 11a.....	2	Civil Engineering 24b.....	2
Civil Engineering 13.....	3	Civil Engineering 13.....	3
Geology 1a.....	4	Geology 1b.....	4
Geology 8a.....	2	*Elective .....	2
*Elective .....	1		18
	18		18

### Senior Year

First Semester	Credit Hours	Second Semester	Credit Hours
Civil Engineering 16.....	4	Civil Engineering 26b.....	2
Civil Engineering 20a.....	3	Civil Engineering 24b.....	2
Mechanical Engineering 14a.....	3	Mechanical Engineering 15b.....	3
Civil Engineering 19a.....	2	Civil Engineering 23b.....	4
Civil Engineering 17a.....	2	Civil Engineering 25b.....	2
*Elective .....	4	Civil Engineering 21b.....	2
	18	*Elective .....	3
	18		18

\*To be chosen with the advice and consent of the candidate's major professor.

# REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ELECTRICAL ENGINEERING

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

## *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Military Art 1.....	1	Military Art 1.....	1
	18		18

## *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 7.....	3	Mathematics 7.....	3
Mathematics 4a.....	3	Civil Engineering 4b.....	3
Physics 1 and 1l.....	4	Physics 1 and 1l.....	4
Mechanical Engineering 7.....	2	Mechanical Engineering 7.....	2
Electrical Engineering 11a or 20.....	2	Electrical Engineering 11b or 20.....	2
Electrical Engineering 26.....	2	Electrical Engineering 26.....	2
Military Art 2.....	2	Military Art 2.....	2
	18		18

## *Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 13, German, French, or Spanish.....	3	English 13, German, French, or Spanish.....	3
Mechanical Engineering 8a.....	4	Mechanical Engineering 9b.....	4
Electrical Engineering 7.....	3	Electrical Engineering 7.....	3
Electrical Engineering 5.....	2	Electrical Engineering 5.....	2
Electrical Engineering 3.....	2	Electrical Engineering 3.....	2
*Elective.....	4	*Elective.....	4
	18		18

## *Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Electrical Engineering 8.....	3	Electrical Engineering 8.....	3
Electrical Engineering 6.....	2	Electrical Engineering 6.....	2
Electrical Engineering 4.....	2	Electrical Engineering 4.....	2
Mechanical Engineering 14a.....	3	Electrical Engineering 27b.....	3
Mechanical Engineering 10.....	2	Mechanical Engineering 10.....	2
Mechanical Engineering 19a.....	3	Electrical Engineering 25b.....	2
*Elective.....	3	*Elective.....	4
	18		18

\*To be chosen with the advice and consent of the candidate's major professor from the following courses: Economics 20a; Electrical Engineering 10a, 10b, 16a, 18a, 18b, 22b; Mechanical Engineering 13a; Chemistry 5a, 6b; Military Art 3, 4; or other approved courses.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MECHANICAL ENGINEERING

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

### *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Military Art 1.....	1	Military Art 1.....	1
	18		18

### *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 4a.....	3	Chemistry 11b.....	2
Mathematics 7.....	3	Mathematics 7.....	3
Physics 1 and 11.....	4	Physics 1 and 11.....	4
Mechanical Engineering 4a.....	2	Mechanical Engineering 6b.....	2
Mechanical Engineering 13a.....	2	Civil Engineering 8b.....	3
Mechanical Engineering 7.....	2	Mechanical Engineering 7.....	2
Military Art 2.....	2	Military Art 2.....	2
	18		18

### *Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mechanical Engineering 8a.....	4	Mechanical Engineering 9b.....	4
Mechanical Engineering 14a.....	3	Mechanical Engineering 15b.....	3
Mechanical Engineering 10.....	2	Mechanical Engineering 10.....	2
Mechanical Engineering 12.....	4	Mechanical Engineering 12.....	4
Mechanical Engineering 5a.....	2	Civil Engineering 26b.....	2
*Elective.....	3	*Elective.....	3
	18		18

### *Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Electrical Engineering 1a.....	3	Electrical Engineering 1b.....	3
Electrical Engineering 19.....	2	Electrical Engineering 19.....	2
Mechanical Engineering 11a.....	2	Mechanical Engineering 17b.....	3
Mechanical Engineering 19a.....	3	Mechanical Engineering 20b.....	2
Mechanical Engineering 18a.....	2	Mechanical Engineering 25b.....	2
Economics 20a.....	3	Electrical Engineering 27b.....	3
*Elective.....	3	*Elective.....	3
	18		18

\*To be chosen with the advice and consent of the candidate's major professor.

# *REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MINING ENGINEERING*

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty-four semester hours as outlined in the following course of study:

## *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 1a.....	3	Mathematics 1b.....	3
Mathematics 2a.....	3	Mathematics 2b.....	3
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Civil Engineering 1a.....	2	Civil Engineering 1b.....	2
Mechanical Engineering 1.....	2	Mechanical Engineering 1.....	2
Military Art 1.....	1	Military Art 1.....	1
	<hr/> 18		<hr/> 18

## *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Mathematics 4a.....	3	Mining Engineering 1b.....	3
Mathematics 7.....	3	Mathematics 7.....	3
Chemistry 5a.....	3	Chemistry 6b.....	3
Geology 1a.....	4	Geology 1b.....	4
Physics 1 and 1l.....	4	Physics 1 and 1l.....	4
Military Art 2.....	2	Military Art 2.....	2
	<hr/> 19		<hr/> 19

## *Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Geology 2.....	3	Geology 2.....	3
Mechanical Engineering 8a.....	4	Mechanical Engineering 8b.....	4
Civil Engineering 6.....	2	Civil Engineering 6.....	2
Civil Engineering 7.....	1	Civil Engineering 7.....	1
Electrical Engineering 1a.....	3	Electrical Engineering 1b.....	3
Geology 5a.....	3	Geology 8b.....	3
*Elective.....	2	*Elective.....	2
	<hr/> 18		<hr/> 18

## *Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Geology 7.....	3	Geology 7.....	3
Mining Engineering 2a.....	3	Metallurgy 1b.....	2
Chemistry 7a.....	3	Metallurgy 2b.....	1
Geology 6a.....	3	Chemistry 11b.....	2
*Elective.....	5	Mining Engineering 25b.....	2
	<hr/> 17	*Elective.....	7
			<hr/> 17

\*To be chosen with the advice and consent of the candidate's major professor.

### REQUIREMENTS FOR THE GRADUATE AND PROFESSIONAL DEGREES IN ENGINEERING

The graduate degrees of *Chemical Engineer*, *Civil Engineer*, *Electrical Engineer*, and *Mechanical Engineer* are granted to students who have completed the required undergraduate course and, in addition, at least one year of graduate work in residence. This graduate work must include one major subject, based on the undergraduate course pursued, and two minor subjects, one or both of which must be closely related to the major subject. The candidate must complete not less than thirty semester credit hours in approved courses and must submit an acceptable thesis in his major subject presenting the results of original research.

The professional degrees of *Chemical Engineer*, *Civil Engineer*, *Electrical Engineer*, and *Mechanical Engineer* are conferred upon graduates of the University of Arkansas who have been in successful practice of their profession for at least three years, two of which must have been done after receiving the bachelor's degree. The candidate must have been in responsible charge of work as principal or assistant for at least one year. In addition to this he must present an acceptable thesis giving the results of original research.

The candidate must submit, in writing, to the Committee on Scholarship of the College of Engineering, a statement of his professional record, the names of at least three references, and the subject of his thesis not later than January 1 of the college year in which the degree is sought. The completed thesis must be in the hands of the Committee on Scholarship not later than May 20, of the same year.

### TRADE COURSES

Short courses, designed to equip young men for some specific trade within the field of engineering, are offered in the departments of civil, electrical, and mechanical engineering. For admission at least a common school education is required. Certificates are granted for the completion of the regular two-year course.

A special bulletin, giving a fuller description of these courses, will be sent upon request. Address, The Registrar, University of Arkansas, Fayetteville.

## DEPARTMENTAL STATEMENTS

## SYMBOLS

The suffix *a* following the numeral indicates first semester courses; the suffix *b*, second semester courses. A repetition of the two (e. g. 7a, 7b) indicates courses offered either semester. A combination of the two (e. g. 7ab) indicates year courses in which credit will be allowed for one semester's work; in courses not so designated the second semester must be completed before credit will be allowed for the first.

## CREDIT HOURS

The number of credit hours allowed in each course is identical with the number of hours of lecture or recitation hours per week through the semester; in laboratory, shop, or field work two to three hours is considered as equivalent to one hour of lecture or recitation.

## CIVIL ENGINEERING

PROFESSOR KNOCH, ASSOCIATE PROFESSOR KNOTT, MR. WHITMAN

The requirements for a degree are outlined on pages 126-127.

The courses in civil engineering include theoretical instruction accompanied by illustrations and as much of engineering practice as possible. The courses will give the student a knowledge of fundamental principles that will enable him to enter intelligently upon professional practice.

The special technical studies which are offered may be grouped under the heads of surveying, applied mechanics, road and railroad engineering, hydraulic engineering, bridge engineering, and sanitary engineering.

The work in surveying extends over three years. It embraces land surveying, leveling and United States public land surveys, during the sophomore year; topography, railroad reconnaissance and location, during the junior year; triangulation and geodesy, during the senior year. Much time is devoted to practice in the field and drafting room, this work being carried on parallel with the class-room work. Each year a party of engineering students goes into camp one week for practice in surveying and locating railway lines.



## HIGHWAY ENGINEERING

In recent years many problems have arisen in connection with the construction and maintenance of highways, creating a demand for men who have been trained for this particular branch of engineering. The course in highway engineering has been arranged to aid in training engineers for this line of work.

The work for the first two years of this course is practically identical with that of civil engineering. In the last two years subjects especially related to highway engineering have been introduced, and other subjects which are considered of less importance in highway work have been dropped from the regular course in civil engineering.

A well equipped laboratory has been provided for making all the standard tests in accordance with the practice of the United States Office of Public Roads.

All students are required to spend the vacation between their junior and senior years with the State Highway Engineer. Actual expenses will be allowed for this work.

## COURSES

No.	Title	Credit	Prerequisites
1a	Drawing .....	2	None
1b	Elementary Descriptive Geometry.....	2	1a
3b	Descriptive Geometry.....	2	1ab
5b	Highways .....	2	None
6	Surveying .....	4	Math. 2a
7	Field Practice .....	2	Math. 2a
8b	Surveying .....	3	Math. 2a
9b	Surveying .....	1	Math. 2a
10	Railroad Engineering .....	4	Math. 2a
11	Field Practice .....	4	6, 7, Math. 2a
12	Topographical Survey.....	†	
13	Drawing .....	4	M. E. 7
16	Roofs and Bridges.....	7	M. E. 8a, 9b
17	Technical Drawing .....	4	M. E. 8a, 9b
18a	Sanitary Engineering.....	2	26b
18b	Waterworks .....	3	26c
19a	Engineering Laboratory.....	2	M. E. 8a, 9b
20a	Masonry and Reinforced Concrete.....	3	M. E. 8a, 9b
20b	Field Practice.....	3	10, 11
21b	Contracts and Specifications.....	2	†
22b	Highway Engineering.....	3	5, 6, 7
23b	Highway Bridges and Culverts.....	4	13, M. E. 8a, 9b
24b	Highway Engineering Laboratory.....	2	5, M. E. 8a, 9b
25b	Thesis .....	2	†
26b	Hydraulics .....	2	Math. 1a, 2a

†See statement.

13. DRAWING.—Instruction in the selection, use, and care of instruments, instrumental drawing, solving geometrical problems, construction of Roman and Gothic capitals, free-hand lettering

and sketching, and working drawings. Drawing practice six hours per week.

ASSOCIATE PROFESSOR KNOTT.

MR. WHITMAN.

1b. ELEMENTARY DESCRIPTIVE GEOMETRY.—Fundamental problems on point, line, plane; intersections, sections. Recitations one hour and drawing practice three hours per week.

ASSOCIATE PROFESSOR KNOTT.

MR. WHITMAN.

3b. DESCRIPTIVE GEOMETRY.—Problems in shades and shadows, isometric projection, and perspective. Drawing practice six hours per week.

ASSOCIATE PROFESSOR KNOTT.

5b. HIGHWAYS.—A study of the location, construction, and maintenance of common macadam and Telford roads; brick, stone, wood, asphalt, and bituminous pavements for city streets. Lectures and recitations two hours per week.

MR. WHITMAN.

6. SURVEYING.—Instruction in the care, use, and adjustment of instruments; use of chain, tape, compass, transit, solar attachment, level, sextant, plane-table; land surveying, contouring, laws and instructions relating to the surveys of the public domain. Lectures and recitations two hours per week, the first, and a part of the second, semester.

ASSOCIATE PROFESSOR KNOTT.

MR. WHITMAN.

7. FIELD PRACTICE.—Exercises in land, topographical, and city surveying, designed to accompany course 6. Field practice three hours per week.

MR. WHITMAN.

8b. SURVEYING.—Instruction in the care, use, and adjustment of instruments; plotting field notes; running simple curves and grade lines for electric railways. Recitations two hours, field practice three hours per week.

MR. WHITMAN.

9b. SURVEYING.—A course in leveling, land surveying, and farm drainage, designed for students in the course in agriculture. Lectures and recitations one hour the first part, and field practice three hours per week the second part, of the semester.

ASSOCIATE PROFESSOR KNOTT.

10. RAILROAD ENGINEERING.—A study of preliminary surveys

and location; transition curves, yards, and turnouts; estimates of earthwork and materials used in construction; the economics of railroad location and management. Lectures and recitations two hours per week.  
PROFESSOR KNOCH.

11. FIELD PRACTICE.—Problems in location of curves, turnouts, and Y's; measurements of embankments and cuts, computation of volumes. Field practice four hours per week.

PROFESSOR KNOCH.

12. RAILROAD SURVEY.—Actual field practice in reconnoissance, preliminary surveys, location, and topographical survey. One week, twelve hours a day.

PROFESSOR KNOCH.

13. DRAWING.—Exercises in drawing topographical maps from actual surveys; computations and detail drawings of structures in stone, wood, and steel. Drawing practice nine hours per week.

ASSOCIATE PROFESSOR KNOTT.

16. ROOFS AND BRIDGES.—A study of the theory of computation of stresses by both analytical and graphical methods; full computations, designs, and bills of materials for roof truss and railroad bridge. Lectures and recitations four hours per week, first semester; three hours, second semester.

PROFESSOR KNOCH.

17. TECHNICAL DRAWING.—Right and oblique arches; drawings for computations of course 16. Lectures and recitations one hour and drawing practice three hours per week.

PROFESSOR KNOCH.

18a. SANITARY ENGINEERING.—Calculation and special details of construction of sewers; separate and combined systems of sewers; purification of sewage; municipal and domestic sanitation. Lectures and recitations two hours per week.

PROFESSOR KNOCH.

18b. WATERWORKS ENGINEERING.—A study of systems of water supply; collection, purification, and distribution of water; location of waterworks, with details of construction and cost estimate; turbines and pumping engines. Lectures and recitations three hours per week.

PROFESSOR KNOCH.

19a. ENGINEERING LABORATORY.—Tests of strength and other properties of materials of construction, tensile and crushing

tests of brick, stone, and cement; flow of water through pipes, elbows, valves, and measurement of water by means of weirs and meters. Laboratory practice four hours per week.

MR. WHITMAN.

20a. MASONRY AND REINFORCED CONCRETE.—A study of the use of mortars; stone and brick masonry; concrete; foundations on land and under water; theory and practice in design of reinforced concrete structures. Lectures and recitations three hours per week.

ASSOCIATE PROFESSOR KNOTT.

20b. FIELD PRACTICE.—Problems in triangulation, topographic surveys, precise leveling; practical astronomy. Lectures and recitations one hour and field practice and computations four hours per week.

ASSOCIATE PROFESSOR KNOTT.

21b. CONTRACTS AND SPECIFICATIONS.—Lectures and recitations two hours per week.

PROFESSOR KNOCH.

22b. HIGHWAY ENGINEERING.—A study of road laws, economics and design of roads and pavements; taxes, bond issues, and assessments; drainage; foundations; comparisons of the different types of roads; road surveying and design. Lectures and recitations three hours per week.

23b. HIGHWAY BRIDGES AND CULVERTS.—Problems in the design of highway bridges; determination of waterways; construction and maintenance of highway bridges and culverts. Lectures and recitations four hours per week.

24b. HIGHWAY ENGINEERING LABORATORY.—Tests of gravel and broken stone to determine hardness, toughness, cementing power, and resistance to abrasion; rattler tests and absorption tests for paving brick; tests of sand and clay; inspection and tests of bituminous materials. Laboratory practice four hours per week.

25b. THESIS.—Each senior or graduate student, who is a candidate for a degree, is required to submit the subject of his thesis not later than December 15th, and the completed thesis not later than May 10th, to a committee, consisting of the candidate's major professor and two other members appointed by the president, for its criticism and approval. All theses must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used they should be made to conform to these

dimensions or some multiple of them. The first page of the thesis should contain the title, the following statement: "Thesis submitted by----- to the faculty of the University of Arkansas in partial fulfilment of the requirements for the degree of-----", and the date. Theses submitted for bachelor degrees must be at least 2,500 words in length.

PROFESSOR KNOCH.

26b. **HYDRAULICS.**—A study of the theory of hydraulics; principles of hydrostatic and hydrodynamic pressures; stream-gauging; water-measuring devices. Lectures and recitations two hours per week.

MR. WHITMAN.

## ELECTRICAL ENGINEERING

PROFESSOR GLADSON, ADJUNCT PROFESSOR STELZNER.

MR. BROWN

The requirements for a degree are outlined on page 128.

The courses in this department seek to combine general and technical subjects in such proportions as to furnish a good foundation for the profession of electrical engineering. Sufficient theory is taught in the class-room and illustrated by laboratory experiments to give the student a knowledge of the underlying principles. Shop experience with manufacturing companies, to give the student specific practical training, is desirable. Such training should be obtained during vacations and after graduation.

### COURSES

No.	Title	Credit	Prerequisites
1ab	Electrical Engineering.....	6	Physics 1
3	Electrical Engineering Design.....	4	†
4	Electrical Engineering Design.....	4	3, 7
5	Electrical Laboratory.....	4	†
6	Electrical Laboratory.....	4	7
7	Dynamo-Electric Machinery.....	6	Physics 1
8	Theory of Alternating Currents.....	6	7
10a, 10b	Electric Railways.....	2	1, 21, or 7
11ab	Telephony and Telegraphy.....	4	None
12ab	Telephone Laboratory.....	4	†
16b	Hydro-Electric Developments.....	2	7, †
17	Electrical Engineering Seminar.....	2	None
18	History of Engineering.....	4	None
19	Elementary Electrical Laboratory.....	4	Physics 1
20ab	Illuminating Engineering.....	4	†

21	Elements of Electrical Engineering.....	10	†
22b	Contracts and Specifications.....	3	1, 7
24	Inspection Trip.....		†
25b	Thesis .....	2	†
26	Electrical Engineering.....	2	Math. 1a, 2a
27b	Electrical Equipment of Power Plants.....	3	26, 1, or 7

†See statement.

1ab. ELECTRICAL ENGINEERING.—A general secondary course in dynamo-electric machinery, generators, motors, transformers, primary and storage batteries, electric signals, mine haulage, and illumination. Lectures and recitations three hours per week.

ADJUNCT PROFESSOR STELZNER.

3. ELECTRICAL ENGINEERING DESIGN.—Working drawings of electrical machinery; designs of direct current machinery. Lectures and recitations one hour, drawing practice three hours per week. This course must be preceded or accompanied by course 7.

MR. BROWN.

4. ELECTRICAL ENGINEERING DESIGN.—Designs of alternating current machinery, generators, motors, transformers, and other induction machines. Lectures and recitations one hour, drawing practice three hours per week.

MR. BROWN.

5. ELECTRICAL LABORATORY.—An extended course in electrical and magnetic measurements; current strength, electro-motive force and resistance; use and calibration of instruments; explorations of magnetic fields, testing of direct current dynamos and motors; primary and storage batteries. Lectures and recitations one hour, laboratory practice three hours per week. This course must be preceded or accompanied by course 7.

ADJUNCT PROFESSOR STELZNER.

6. ELECTRICAL LABORATORY.—A full experimental course in operating and testing direct and alternating current machines; transmission, storage, and transformation of electrical energy. Lectures and recitations one hour, laboratory practice three hours per week.

ADJUNCT PROFESSOR STELZNER.

7. DYNAMO-ELECTRIC MACHINERY.—A study of direct current apparatus, including types of motors, generators, and converters; designs, calculations, construction, tests, and operation. Lectures and recitations three hours per week.

ADJUNCT PROFESSOR STELZNER.

8. THEORY OF ALTERNATING CURRENTS.—A study of alternating



current generators, motors, transformers, measurements, theories of design, and calculations. Lectures and recitations three hours per week.  
PROFESSOR GLADSON.

10a, 10b. ELECTRIC RAILWAYS.—A study of the construction, equipment, and operation of different types of electric roads. Lectures and recitations two hours per week.

ADJUNCT PROFESSOR STELZNER.

11ab. TELEPHONY AND TELEGRAPHY.—A study of telephony, telegraphy, signals and wireless telegraphy. Lectures and recitations two hours per week.

MR. BROWN.

12ab. TELEPHONE LABORATORY.—Experiments with telephone, telegraph, wireless telegraph and telephone, railway signals, and related apparatus. Lectures and recitations one hour, laboratory practice three hours per week. This course must be preceded or accompanied by course 11ab.

MR. BROWN.

16a. HYDRO-ELECTRIC ENGINEERING.—A study of the methods of investigating power possibilities for flowing water, collecting data, selecting power sites, designing dams, power house, transmission lines, and machinery. Lectures and recitations three hours per week. This course must be preceded or accompanied by course 8a.

PROFESSOR GLADSON.

17. ELECTRICAL ENGINEERING SEMINAR.—Students who attend and take part in at least three-fourths of the meetings of the University of Arkansas Branch of the American Institute of Electrical Engineers during their junior and senior years, and prepare and present an acceptable original paper on some engineering subject, will be allowed two credit hours.

18. HISTORY OF ENGINEERING.—The early development of engineering, as traced from historical records and from the remains of ancient works; the development of engineering in later periods and its growth into a separate profession; the effects on civilization, general history, and economic problems of the several inventions and other improvements which have marked the development of engineering; a study of the lives of a few famous engineers; the development of general technical principles of engineering. Lectures and recitations two hours per week.

ADJUNCT PROFESSOR STELZNER.

19. **ELEMENTARY ELECTRICAL LABORATORY.**—Designed to illustrate the application of electrical machinery for power purposes. It includes simple testing, operating, and care of alternating and direct current machinery. Lectures and recitations one hour, laboratory practice three hours per week.

ADJUNCT PROFESSOR STELZNER.

20ab. **ILLUMINATING ENGINEERING.**—A study of electric light wiring and the different methods of artificial illumination; sources, intensity, and distribution of light; physiological and hygienic problems; direct and indirect lighting; reflecting surfaces; illumination and photometric calculations. Lectures and recitations two hours per week. This course must be preceded or accompanied by Physics I and Mathematics 7.

MR. BROWN.

21. **ELEMENTS OF ELECTRICAL ENGINEERING.**—A general introductory course to the study of electrical engineering, designed for students in the trades courses in electrical engineering. Credit will not be allowed in this course towards an electrical engineering degree. Lectures and recitations five hours per week. This course must be preceded or accompanied by course I or 7.

MR. BROWN.

22b. **CONTRACTS AND SPECIFICATIONS.**—A study of correct forms of specifications for electrical installation, estimates of cost, forms of bids and contracts, and the engineer's responsibility. Lectures and recitations three hours per week.

PROFESSOR GLADSON.

24. **INSPECTION TRIP.**—During the fourth year the senior class makes a visit of inspection to power houses, large electrical installations, and manufacturing plants, or a week is spent in actual practice work in determining the hydro-electric possibilities of some stream.

PROFESSOR GLADSON.

25. **THESIS.**—Each senior or graduate student who is a candidate for a degree, is required to submit the subject of his thesis not later than December 15, and the completed thesis not later than May 10, to a committee, consisting of the candidate's major professor and two other members appointed by the president, for its criticism and approval. All theses must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams

are used they should be made to conform to these dimensions or some multiple of them. The first page of the thesis should contain the title and the following statement: "Thesis submitted by-----to the faculty of the University of Arkansas in partial fulfillment of the requirements for the degree of-----," and the date. Theses submitted for bachelor degrees must be at least 2,500 words in length.

PROFESSOR GLADSON.

26. ELECTRICAL ENGINEERING.—A general introductory course to the study of electrical engineering, including recitations and demonstrations on electric and magnetic circuits and machines; measuring instruments, their use and calibration. Lectures and recitations two hours per week.

ADJUNCT PROFESSOR STELZNER.

27b. ELECTRICAL EQUIPMENT OF POWER PLANTS.—Selection of electrical machinery for power stations; station construction, operation, and management. A study of the different methods of electrical power distribution for light, railways, or stationary power; long distance transmission. Lectures and recitations three hours per week.

PROFESSOR GLADSON.

## MECHANICAL ENGINEERING

PROFESSOR BAENDER, ASSOCIATE PROFESSOR MITCHELL, MR. CLOUSE, MR. DINWIDDIE, MR. DANNER

The requirements for a degree are outlined on page 129.

Mechanical engineers are in demand in various lines of engineering work, such as: consulting engineering; power plant designing, constructing, and operating; designing, constructing, erecting, operating, and testing all kinds of machinery; manufacturing; engineering salesmanship; heating and ventilating engineering; and efficiency engineering.

The course in mechanical engineering is designed to give the student a broad foundation in the subjects that are of the greatest importance in his work, a technical education in his chosen field made practical by shop and laboratory courses, and, in electives, a certain amount of specialization and cultural development. It is believed that such a course will enable the

student to be of immediate value to his employer and that it will insure certain advancement in his profession.

## COURSES

NO.	Title	Credit	Prerequisites
1	General Shop Practice.....	4	None
2	Carpentry and Forge Practice.....	2	None
3a	Manual Training.....	4	None
4a	Forge and Machine Shop Practice.....	2	1
5a	Advanced Shop Practice.....	2	1, 4a
6b	Kinematics .....	2	C. E. 1, Math. 2a
7	Mechanical Drawing .....	4	C. E. 1
8a	Theoretical Mechanics.....	4	Math. 4 and 7
9b	Strength of Materials .....	4	8a
10	Experimental Engineering.....	4	†
11a	Advanced Experimental Engineering.....	2	10
12	Machine Design .....	8	6b, †
13a	Engines and Boilers.....	2	None
14a	Heat Power Engineering .....	3	Physics 1, Math. 7
15b	Heat Power Engineering.....	3	Physics 1, Math. 7
16	Engine and Boiler Design.....	6	14a, †
17b	Heating and Ventilating.....	3	None
18a	Refrigeration .....	2	14a
19a	Mechanical Equipment of Power Plants.....	3	14a
20b	Industrial Engineering.....	2	None
21	Agricultural Drawing.....	2	None
25b	Thesis .....	2	†

## TRADE COURSES

Aab	Woodworking and Pattern-Making..	2-4	None
Bab	Foundry Practice .....	2-4	None
Cab	Forge Practice.....	2-4	None
Dab	Machine Shop Practice..	2-4	None
Fa	Steam Engines and Boilers .....	3	None
Gb	Gas Engines and Gas Producers .....	3	Fa
Hb	Elementary Power Plant Design .....	3	None
I	Elementary Experimental Engineering .....	4	†
K	Elementary Mechanical Drawing .....	2-4	None
L	Elementary Mechanics .....	6	None
M	Automobile Engineering. ....	4	None

†See statement.

I. GENERAL SHOP PRACTICE.—A general course in shop work, including practice in joinery, the use and care of wood-working tools with proper methods of sharpening them, and the making of patterns and core boxes; foundry practice, in moulding in green sand, melting and pouring brass and iron, and core-making; forge practice in the management of fires, drawing, welding, forging, and annealing and tempering of tools; machine shop practice including bench work in chipping and filing, and practical exercises in turning, thread-cutting, planing, drilling, grinding, and general repairing of machinery. Shop practice six hours per week.

MR. DINWIDDIE.

MR. CLOUSE.

MR. DANNER.

2. **CARPENTRY AND FORGE PRACTICE.**—A general course in shop work, designed especially for students in the course in agriculture. Shop practice three hours per week.

MR. DINWIDDIE.

MR. CLOUSE.

3a. **MANUAL TRAINING.**—A course in joinery, cabinet-making, and wood-turning with emphasis on the care, use, and proper methods of sharpening tools, designed especially for prospective teachers in manual training. Shop practice twelve hours per week.

MR. DINWIDDIE.

4a. **FORGE AND MACHINE SHOP PRACTICE.**—An advanced course in forge and machine shop practice, designed as a continuation of course 1. Shop practice six hours per week.

MR. CLOUSE.

5a. **ADVANCED SHOP PRACTICE.**—Advanced work in machine shop, including the lathe, planer, and milling machine. Special attention is given to the making of tools, including milling cutters, twist drills, reamers, and dies, and to the cutting of plain, beveled and worm gears. In this course special attention is given to the introduction of modern shop methods—time study. Shop practice six hours per week.

MR. CLOUSE.

6b. **KINEMATICS.**—An investigation of the means by which motion is transmitted in machines and of the principles underlying the design of gears, cams, and similar mechanical devices. Lectures and recitations two hours per week.

ASSOCIATE PROFESSOR MITCHELL.

7. **MECHANICAL DRAWING.**—An elementary course in mechanical drawing, including lettering, technical sketching of machine parts, detail and assembly drawing, tracing and blue-printing, perspective and isometric drawing, drawing of developed surfaces, and topographical drawing. Drawing practice six hours per week.

ASSOCIATE PROFESSOR MITCHELL.

8a. **THEORETICAL MECHANICS.**—A study of statics and dynamics, including a mathematical discussion of inertia, energy, and similar topics. Lectures and recitations four hours per week.

PROFESSOR BAENDER.

9b. **STRENGTH OF MATERIALS.**—A study of the materials of construction, including the mathematical development of the formulæ for calculating the strength of beams, columns, and shaft-

ing, with numerous practical problems illustrating the theory involved.

PROFESSOR BAENDER.

10. EXPERIMENTAL ENGINEERING.—Exercises in the calibration of engineering instruments, such as indicators, steam gauges, planimeters, nozzles, and meters; valve-setting, and efficiency tests on steam engines, gas engines, and boilers. Laboratory practice four hours per week. This course must be preceded or accompanied by course 14a.

PROFESSOR BAENDER.

11a. ADVANCED EXPERIMENTAL ENGINEERING.—An advanced course in experimental engineering, designed as a continuation of course 10. Laboratory practice four hours per week.

PROFESSOR BAENDER.

12. MACHINE DESIGN.—A study of the kinematics of machinery, gear wheels, and link motion. Designs will be made of complete machines, including lathes, punches, and similar machines. Complete working drawings will be made, including the application of theory to practical problems. This course must be preceded or accompanied by course 8a.

ASSOCIATE PROFESSOR MITCHELL.

13a. ENGINES AND BOILERS.—An elementary study of engines, boilers, and auxiliaries, designed to acquaint the student with the details of construction and operation of power-plant equipment. No thermo-dynamic theory is introduced. Lectures and recitations two hours per week.

ASSOCIATE PROFESSOR MITCHELL.

14a. HEAT POWER ENGINEERING.—A study of the thermo-dynamic theory underlying heat engines and its application to the steam engine. Valve and valve gears are analyzed by the valve diagrams. A study will also be made of boilers, superheaters, and the properties of saturated and superheated steam. Lectures and recitations three hours per week.

PROFESSOR BAENDER.

15b. HEAT POWER ENGINEERING.—A continuation of course 14a, including a study of the thermo-dynamic theory as applied to internal combustion engines. Lectures and recitations three hours per week.

PROFESSOR BAENDER.

16. ENGINE AND BOILER DESIGN.—A study of the mechanics of engines and boilers with problems illustrating the thermo-dy-



namic theory underlying the design. This course must be preceded or accompanied by course 9b.

PROFESSOR BAENDER.

17b. HEATING AND VENTILATING.—A study of the theory of heating and ventilating. Working drawings will be made of different systems and compared. Lectures and recitations two hours, drawing practice three hours per week.

ASSOCIATE PROFESSOR MITCHELL.

18a. REFRIGERATION.—A study of the theory of the absorption and compression systems of ice-making, and of ice-making machinery and insulation. Lectures and recitations two hours per week.

PROFESSOR BAENDER.

19a. MECHANICAL EQUIPMENT OF POWER PLANTS.—Instruction in the selection of machinery for power plants, coal-handling, and ash-handling. A special study will be made of the characteristics of operation of the various types of prime movers and auxiliaries under variable loads so that equipment best adapted for the problem at hand may be selected. Lectures and recitations two hours, drawing practice three hours per week.

PROFESSOR BAENDER.

20b. INDUSTRIAL ENGINEERING.—A study of the factors controlling cost and efficiency systems, rate-making, and premium systems; depreciation of machinery and equipment; taxes and insurance. Lectures and recitations two hours per week.

ASSOCIATE PROFESSOR MITCHELL.

21. AGRICULTURAL DRAWING.—A study of the elementary principles of mechanical drawing with exercises in free-hand lettering and sketching and in designing and drawing farm structures. Drawing practice three hours per week.

ASSOCIATE PROFESSOR MITCHELL.

25b. THESIS.—Each senior or graduate student who is a candidate for a degree, is required to submit the subject of his thesis not later than December 15th, and the completed thesis not later than May 10th, to a committee, consisting of the candidate's major professor and two other members appointed by the president, for its criticism and approval. All theses must be neatly typewritten on one side of plain white paper, eight by ten inches in size, leaving a one-inch margin. When drawings or diagrams are used they should be made to conform to these dimensions or some multiple of them. The first page of the

thesis should contain the title, the following statement: "Thesis submitted by-----to the faculty of the University of Arkansas in partial fulfilment of the requirements for the degree of-----", and the date. Theses submitted for bachelor degrees must be at least 2,500 words in length.

PROFESSOR BAENDER.

#### TRADE COURSES

The following courses are designed for students in the engineering trade courses. Credit in these courses will not be allowed towards an engineering degree.

Aab. WOODWORKING AND PATTERN MAKING.—Practice in joinery, including the use and care of woodworking tools with proper methods of sharpening them, and the making of patterns and core boxes. Shop practice three to six hours per week, supplemented by occasional lectures.

MR. DINWIDDIE.

Bab. FOUNDRY PRACTICE.—Exercises in moulding in green sand, melting and pouring brass and iron, and core making. Shop practice three to six hours per week, supplemented by occasional lectures.

MR. DANNER.

Cab. FORGE PRACTICE.—Instruction in management of fires, drawing, and welding; exercises involving various difficult forging operations. Special attention is given to the heat treatment of steel, forging, annealing, and tempering of tools. Shop practice three to six hours per week.

MR. CLOUSE.

Dab. MACHINE SHOP PRACTICE.—Bench work in chipping and filing; practical work in turning, thread-cutting, planing, drilling, grinding, and general repairing of machinery. Shop practice three to six hours per week.

MR. CLOUSE.

Fa. STEAM ENGINES AND BOILERS.—An elementary course dealing with the theory of steam engines, boilers, and their care and management; valves, valve diagrams, and their practical operation. Lectures and recitations three hours per week.

ASSOCIATE PROFESSOR MITCHELL.

Gb. GAS ENGINES AND GAS PRODUCERS.—The elementary principles of internal combustion engines and gas producers. A

study will be made of the various carburetors together with the results obtained by using various fuels; ignition systems, valve-setting, and practical problems connected with operation of internal combustion engines. Lectures and recitations three hours per week.

ASSOCIATE PROFESSOR MITCHELL.

Hb. ELEMENTARY POWER PLANT DESIGN.—A discussion of the mechanical equipment of power plants, including coal-handling, ash-handling, prime movers, and auxiliaries. This course will be entirely practical. The student will be required to make a lay-out of a power plant from data furnished him. Lectures and recitations two hours, drawing practice three hours per week.

PROFESSOR BAENDER.

J. ELEMENTARY EXPERIMENTAL ENGINEERING.—An elementary course in experimental engineering, including simple tests upon engines, condensers, pumps, and boilers; calibration of gauges, indicators, and valve setting; and indicator cards. Laboratory practice four hours per week. This course must be preceded or accompanied by course Fa.

PROFESSOR BAENDER.

K. ELEMENTARY MECHANICAL DRAWING.—Free-hand lettering, practice and use of instruments, technical sketching of machine parts, and the making of working drawings from sketches, tracing and blue-printing. Drawing practice three to six hours per week.

ASSOCIATE PROFESSOR MITCHELL.

L. ELEMENTARY MECHANICS.—An elementary course in mechanics and strength of materials, force, energy, work, and similar subjects. Lectures and recitations three hours per week.

ASSOCIATE PROFESSOR MITCHELL.

M. AUTOMOBILE ENGINEERING.—Elementary theory of automobiles, ignition systems, lubrication, and general control; grinding valves, adjusting bearings, carburetors, brakes, and transmissions; general automobile repair. Lectures and recitations one hour, laboratory practice three hours per week.

MR. CLOUSE.

## MINING ENGINEERING

PROFESSOR DRAKE

The requirements for a degree are outlined on page 130. The course is planned so as to give the major instruction in geology,

mining engineering, and chemistry, with minor work in civil, mechanical, and electrical engineering.

The practical work of mining, metallurgy, and ore dressing can be learned so much more readily at practical work than no laboratory work in these lines is offered. Students are expected, however, to spend parts of at least two summer vacations at ordinary day work in some mine, mill, or smelter where they will be expected to ask questions of the workmen, keep notes of their observations, and compute the costs of some detailed operations.

While this course is not unduly exacting, it is severe and should be undertaken only by students well prepared mentally and physically.

#### COURSES

No.	Title	Mining Engineering	Credit	Prerequisites
1b	Details of mining operations.....		3	None
2a	Ore Dressing.....		3	None
		<b>Metallurgy</b>		
1b	General Metallurgy.....		2	None
2b	Assaying .....		1	Chem. 7a

#### MINING ENGINEERING

1b. DETAILS OF MINING OPERATIONS.—A study of excavating, drilling, blasting, driving shafts, adits, and drifts, stoping, timbering, hoisting, draining, and transporting. Lectures and recitations three hours per week.

PROFESSOR DRAKE.

2a. ORE DRESSING.—A study of general principles and theory of ore dressing, cleansing, crushing, sizing, and classifying, jigging, table concentrating, and stamp milling of gold and silver ores, with description of typical ore dressing works. Lectures and recitations three hours per week.

PROFESSOR DRAKE.

#### METALLURGY

1b. GENERAL METALLURGY.—An elementary study of fuels and furnaces and the metallurgy of iron, steel, copper, lead, silver, and gold. Lectures and recitations two hours per week.

PROFESSOR DRAKE.

2b. ASSAYING.—Fire assaying of various classes of ores and furnace products of gold, silver, and lead. Laboratory four hours per week with occasional lectures and recitations.

PROFESSOR DRAKE.

## COLLEGE OF AGRICULTURE

The courses in the College of Agriculture are designed to train men and women for efficiency in agriculture, whether for the profession of farming, for teaching agriculture, or for specialization in limited fields in preparation for government service.

### ADMISSION

For a detailed statement of the entrance requirements and a description of the subjects accepted for entrance see page 31.

### COURSES OF STUDY

The College of Agriculture offers a four-year course in agriculture leading to the degree of *Bachelor of Science in Agriculture* (B. S. A.); special short courses in agriculture; a four-year course in home economics leading to the degree of *Bachelor of Science in Home Economics* (B. S. H. E.); and a special two-year course in home economics for club and demonstration work.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred forty credit hours as outlined in the following course of study:

#### *Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Animal Husbandry 3a.....	4	Agronomy 1b.....	4
Biology 2.....	4	Biology 2.....	4
Chemistry 1.....	4	Chemistry 1.....	4
English 1.....	3	English 1.....	3
Mechanical Engineering 2.....	1	Mechanical Engineering 2.....	1
Mechanical Engineering 21.....	1	Mechanical Engineering 21.....	1
Military Art 1.....	1	Military Art 1.....	1
	18		18

#### *Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Agronomy 2a and 21.....	4	Horticulture 1b.....	3
Chemistry 5a.....	2	Chemistry 6b.....	2
Physics 5 and 51.....	4	Physics 5 and 51.....	4
Chemistry 3a.....	3	Agricultural Chemistry 1b.....	3
Mathematics 10a.....	3	Civil Engineering 9b.....	1
Military Art 2.....	2	Animal Husbandry 2b.....	3
	18	Military Art 2.....	2
	18		18

At the beginning of the junior year the candidate will be required to choose one major and one minor subject from the departments in the college, the choice of which will determine largely his course of study for the junior and senior years.

The following course is prescribed for those who choose Agronomy as a major:

<i>Junior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 13.....	3	English 13.....	3
Economics 12.....	3	Economics 12.....	3
Entomology 1a.....	3	Bacteriology 1b.....	5
Agronomy 4.....	4	Agronomy 4.....	4
*Elective.....	5	*Elective.....	3
	<u>18</u>		<u>18</u>
<i>Senior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
Agronomy 9a.....	3	Agronomy 8b.....	3
Agronomy 11 (and).....	4	Agronomy 5b and 5l.....	4
*Elective.....	13	Agronomy 7b and 7l.....	4
	<u>16</u>	Agronomy 11 (and).....	5
		*Elective.....	5
			<u>16</u>

\*To be chosen from courses approved by the candidate's major professor so as to include for the junior and senior years not less than twenty credit hours in Agronomy and not less than twelve credit hours in one minor subject.

The following course is prescribed for those who choose Animal Husbandry as a major:

<i>Junior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 13.....	3	English 13.....	3
Economics 12.....	3	Economics 12.....	3
Entomology 1a.....	3	Bacteriology 1b.....	5
Veterinary Science 1a.....	3	Veterinary Science 1b.....	3
Animal Husbandry 4a.....	3	Animal Husbandry 3l.....	2
Animal Husbandry 1a.....	3	Animal Husbandry 1b or 3b.....	2
	<u>18</u>		<u>18</u>
<i>Senior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
Biology 7a.....	5	Animal Husbandry 4b.....	3
Animal Husbandry 9 (and).....	11	Animal Husbandry 9 (and).....	13
*Elective.....	11	*Elective.....	13
	<u>16</u>		<u>16</u>

\*To be chosen from courses approved by the candidate's major professor so as to include for the junior and senior years not less than twenty credit hours in Animal Husbandry and not less than twelve credit hours in one minor subject.



The following course is prescribed for those who choose Horticulture as a major:

*Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 13.....	3	English 13.....	3
Economics 12.....	3	Economics 12.....	3
Entomology 1a.....	3	Bacteriology 1b.....	5
Horticulture 2.....	4	Horticulture 2.....	4
Horticulture 3a.....	3	Horticulture 5b.....	3
	<hr/> 18		<hr/> 18

*Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Horticulture 6.....	1	Horticulture 6.....	1
Horticulture 7a.....	3	Plant Pathology 3b and 3l.....	4
Horticulture 9 (and).....		Entomology 2b.....	2
*Elective.....	12	Horticulture 9 (and).....	
	<hr/> 16	*Elective.....	9
			<hr/> 16

\*To be chosen from courses approved by the candidate's major professor so as to include for the junior and senior years not less than twenty credit hours in Horticulture and not less than twelve credit hours in one minor subject.

The teacher's certificate is granted to all candidates for a degree who complete the following course:

*Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 13.....	3	English 13.....	5
Economics 12.....	3	Economics 12.....	3
Entomology 1a.....	3	Bacteriology 1b.....	5
Education 1a.....	3	Education 20b.....	3
Education 22a.....	2	Education 23b.....	2
*Elective.....	4	*Elective.....	2
	<hr/> 18		<hr/> 18

*Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Education 24.....	4	Education 24.....	4
*Elective.....	12	*Elective.....	12
	<hr/> 16		<hr/> 16

\*To be chosen from courses approved by the candidate's major professor so as to include for the junior and senior years not less than sixteen credit hours in one major subject including the thesis, not less than twelve credit hours in one minor subject including courses in not more than two departments, and six credit hours additional in education.

The following course is prescribed for those who are preparing for graduate or professional work:

<i>Junior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 13.....	3	English 13.....	3
Economics 12.....	3	Economics 12.....	3
Entomology 1a.....	3	Bacteriology 1b.....	5
French, German, or Spanish.....	3	French, German, or Spanish ..	3
*Elective .....	6	*Elective .....	4
	18		18
<i>Senior Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
*Elective .....	16	*Elective .....	16

\*To be chosen from courses approved by the candidate's major professor so as to include for the junior and senior years not less than twenty credit hours in one major subject including the thesis and not less than twelve credit hours in one minor subject.

### SHORT COURSE IN AGRICULTURE

The short course in agriculture is designed for those who cannot remain away from home the entire year and who desire a practical course in preparation for farming. The course begins November 15 and continues for three months. To be eligible for admission, applicants must be at least sixteen years of age and must have a common school education.

Detailed information will be given upon request. Address the Dean, College of Agriculture, University of Arkansas, Fayetteville, Arkansas.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS

The candidate must meet the entrance, residence, and registration requirements and must complete satisfactorily one hundred thirty-two credit hours in approved courses as outlined in the following course of study:

<i>Freshman Year</i>			
First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Physics 6 and 6l.....	4	Physics 6 and 6l.....	4
Home Economics 30.....	3	Home Economics 30.....	3
Art 2a.....	2	Art 2b.....	2
Physical Education 1.....	1	Physical Education 1.....	1
	17		17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Biology 8.....	4	Biology 8.....	4
Home Economics 10.....	3	Home Economics 10.....	3
Bacteriology 2a.....	5	Home Economics 34b.....	2
Home Economics 31.....	3	Home Economics 31.....	3
Physical Education 2.....	1	Physical Education 2.....	1
*Elective .....	1	Chemistry 10b.....	4
	17		17

*Junior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Foreign Language .....	3	Foreign Language .....	3
Home Economics 20.....	3	Home Economics 20.....	3
Home Economics 11.....	3	Home Economics 11.....	3
Home Economics 25 or 32.....	2	Home Economics 25 or 32.....	2
*Elective .....	5	*Elective .....	5
	16		16

*Senior Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Foreign Language .....	3	Foreign Language .....	3
Education 24.....	4	Education 24.....	4
Home Economics 1.....	3	Home Economics 1.....	3
Home Economics 40a.....	2	Home Economics 45b.....	4
*Elective .....	4	Home Economics 21b.....	2
	16		16

\*To be chosen with the advice and consent of the candidate's major professor. Students who expect to teach should elect courses 1a, 20b, 22a, and 23b in Education in order to fulfill the requirements for the teacher's certificate. (See page 115.)

### REQUIREMENTS FOR A CERTIFICATE IN HOME ECONOMICS

The following two-year course is offered for students who are preparing to do club and demonstration work. A certificate is awarded to all who meet the entrance, residence, and registration requirements and complete satisfactorily at least sixty-eight semester hours as outlined in the following course of study:

*Freshman Year*

First Semester	Credit Hours	Second Semester	Credit Hours
English 1.....	3	English 1.....	3
Chemistry 1.....	4	Chemistry 1.....	4
Home Economics 30.....	3	Home Economics 30.....	3
Home Economics 10.....	3	Home Economics 10.....	3
Physical Education 1.....	1	Physical Education 1.....	1
*Elective .....	3	*Elective .....	3
	17		17

*Sophomore Year*

First Semester	Credit Hours	Second Semester	Credit Hours
Home Economics 11.....	3	Home Economics 11.....	3
Home Economics 20.....	3	Home Economics 20.....	3
Home Economics 41.....	3	Home Economics 41.....	3
Bacteriology 2a.....	5	Physical Education 2.....	1
Physical Education 2.....	1	*Elective .....	7
*Elective .....	2		
	<hr/> 17		<hr/> 17

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\*To be chosen from courses approved by the student's adviser.

For a description of the three-year teacher's course, see the College of Education, page 117.

## DEPARTMENTAL STATEMENTS

## SYMBOLS

The suffix *a* following the numeral indicates first semester courses; the suffix *b*, second semester courses. A repetition of the two (e. g. 7a, 7b) indicates courses offered either semester. A combination of the two (e. g. 7ab) indicates year courses in which credit will be allowed for one semester's work; in courses not so designated the second semester must be completed before credit will be allowed for the first. The suffix *l* indicates laboratory courses.

## CREDIT HOURS

The number of credit hours allowed in each course is identical with number of hours of lecture or recitation per week through the semester; in laboratory, shop, or field work two to three hours is considered as equivalent to one hour of lecture or recitation.

## AGRICULTURAL CHEMISTRY

PROFESSOR RATHER, MR. RIDGELL

Agricultural chemistry deals mainly with the changes occurring in the soil, the growth and life of plants, the feeding of animals, and the preparation of food products. It is essentially the application of chemistry to agricultural problems.

It is assumed that the student has a knowledge of general chemistry and is familiar with the properties of the more commonly occurring elements and their compounds.

## COURSES

No.	Title	Credits	Prerequisites
1b	Agricultural Chemistry	3	Chemistry 1, 3, and 5
2	Advanced Agricultural Chemistry	†	1b, Chemistry 1, 3, 5, and 6

†See statement.

1b. AGRICULTURAL CHEMISTRY.—A detailed study of the application of chemistry to agricultural problems, accompanied by oral and written reviews of experiment station bulletins dealing with various phases of agricultural chemistry. Lectures, recitations, and reports, three hours per week.

PROFESSOR RATHER.

2. **ADVANCED AGRICULTURAL CHEMISTRY.**—Chemical analysis of feeds, fertilizers, insecticides, fungicides, dairy products, soils, and foods. Laboratory work supplemented by lectures, the amount of credit to be determined by the work done.

PROFESSOR RATHER.

MR. RIDGELL.

## AGRONOMY

PROFESSOR BARKER, ASSISTANT PROFESSOR HUNGERFORD,  
ASSISTANT PROFESSOR OSBORN, MR. AYRES

The courses in this department are designed to meet the needs of (1) students who desire a general knowledge of the subject as a part of a cultural education, (2) students who are interested especially in farm operations or the management of land, (3) students who desire a technical knowledge of the subject as a preparation for teaching or graduate or research work.

### COURSES

No.	Title	Credit	Prerequisites
1b	Agronomy .....	4	None
2a	Soil Physics Lecture .....	1	1b
21	Soil Physics Laboratory.....	1	†
4	Farm Crops .....	8	1b, 2a
5b	Soil Fertility Lecture.....	3	2a
51	Soil Fertility Laboratory.....	1	†
6a	Soil Classification.....	3	2a
6b	Farm Drainage .....	4	2a
7b	Cotton Production.....	2	1b, 2a
71	Cotton Judging .....	2	†
8a	Genetics .....	3	†
8b	Plant Breeding.....	3	†
9ab	Farm Management .....	3 or 6	†
10	Research Work.....	1	†
11	Thesis .....	1-4	†
12	Public School Agriculture.....	8	None

†See statement.

1b. **AGRONOMY.**—A study of crops—cotton, corn, small grains, grasses, clovers, forage, and miscellaneous—including varieties, strains, quality, grain standardization, the use of score cards, grading, identification of seeds of grasses, clovers, alfalfa, and other legumes and forage crops, weed seeds, and characteristic adulterants. Stress is placed upon the staple crops. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR BARKER.

2a. **SOIL PHYSICS.**—A study of the nature, origin, formation, physical properties, and classification of soils; soil moisture and



the methods of conserving it; movement of soil water; its relation to color, light, and temperature; objects and methods of use of farm implements as related to the various soils and crops; cultivation and drainage as affecting soil moisture, temperature, aeration, root development, and the supply of available plant food. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR HUNGERFORD.

21. SOIL PHYSICS.—The nature of soil, methods of treatment and effect of these methods upon aeration, texture, temperature, moisture, water-holding capacity, and crop production. The work comprises the determination of such constants as specific gravity, pore space, capillarity, and organic matter, of the various types of soils; mechanical analysis of soils. Laboratory practice three hours per week, designed to accompany course 2a.

ASSISTANT PROFESSOR HUNGERFORD.

4. FARM CROPS.—A thorough study of the forage and cereal crops; methods of cultivating, seeding, harvesting, storing, and marketing; testing, selecting, and improving; combating weeds. Lectures and recitations two hours, laboratory practice four hours per week.

PROFESSOR BARKER.

ASSISTANT PROFESSOR OSBORN.

5b. SOIL FERTILITY.—A study of conditions governing productivity, exhaustion of soils, and maintenance of fertility; soil bacteria; organic matter, green manures, farm manures, and commercial fertilizers, rotation of crops and treatment of soil; soil building, a permanent agriculture. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR HUNGERFORD.

51. SOIL FERTILITY.—A laboratory course in soil fertility designed to accompany course 5b. Laboratory practice three hours per week.

ASSISTANT PROFESSOR HUNGERFORD.

6a. SOIL CLASSIFICATION.—This course is designed to familiarize the student with the methods and practice of soil survey work. The important soil types will be studied with special reference to Arkansas and the South in general. Lectures and recitations one hour, field practice four hours per week.

ASSISTANT PROFESSOR HUNGERFORD.

6b. FARM DRAINAGE.—A study of drainage, irrigation, and ter-

racing with reference to the farm; mapping, planning, and laying drainage systems; field work, including the care, adjustment, and use of instruments for this purpose. Lectures and recitations two hours, field practice four hours per week.

ASSISTANT PROFESSOR HUNGERFORD.

7b. COTTON PRODUCTION.—An advanced course in producing and handling cotton. The following topics will be studied in detail; origin, history, production, composition, cropping systems, improvement, pests, diseases, harvesting, storing, and marketing. Lectures and recitations two hours per week.

MR. AYRES.

7l. COTTON JUDGING.—This course is intended primarily to prepare students for judging fair exhibits of cotton, grading and stapling cotton, and selecting cotton plants for breeding or improvement purposes, and for exhibit. Such laboratory exercises as are necessary to supplement course 7b will be conducted. The methods of handling and grading the crop will be emphasized. The grade causes will be studied. Practice grading and stapling of "pulling" will constitute the major part of the course. The government standards will be used for comparison. Laboratory practice four hours per week.

MR. AYRES.

8a. GENETICS.—A study of the fundamental principles of variation and heredity, preparatory to courses in practical plant and animal breeding. This course is designed to give a thorough knowledge of the basic principles involved in the systematic improvement of plants and animals. Lectures and recitation three hours per week. This course is open only to seniors.

ASSISTANT PROFESSOR OSBORN.

8b. PLANT BREEDING.—The practical application of the principles of variation and heredity to the breeding of general farm crops. Special attention is paid to the practical breeding of corn, cotton, small grains, and forage crops. Lectures and recitations, three hours per week. This course is open only to seniors.

ASSISTANT PROFESSOR OSBORN.

9ab. FARM MANAGEMENT.—A study of the general principles of farm management; farm organization; the choice of a farm; types of farming; farming as a business; administration and cost of production; marketing farm products; records and ac-

counts. Lectures and recitations three hours per week. This course is open only to seniors.

PROFESSOR BARKER.

10. RESEARCH WORK.—Research work in special problems designed for advanced students.

11. THESIS.—Seniors who choose their major subject in Agronomy are required to submit an acceptable research thesis equivalent to not less than one nor more than four credit hours.

PROFESSOR BARKER.

12. PUBLIC SCHOOL AGRICULTURE.—A course in general agriculture, designed to prepare students to teach the subject in the public schools of the state. Lectures and recitations two hours, laboratory and field practice four hours per week.

PROFESSOR BARKER.

## ANIMAL HUSBANDRY

PROFESSOR DVORACHEK, MR. SANDHOUSE, MR. HERZER,  
MR. STOUT

This department offers courses in live stock and poultry production, and dairying. Training is given in the selection, breeding, feeding, development, care, and management of the various classes and breeds of farm animals. The stock and poultry owned by the department are used to familiarize the student with the various types and breeds of live stock. Students interested in dairying have the opportunity to study the machinery in operation in the creamery.

### COURSES

No.	Title	Credit	Prerequisites
1a	Live Stock Judging.....	3	3a
1b	Live Stock Judging.....	2	1a, 3a
2a	Poultry Husbandry.....	3	None
2b	Farm Dairying.....	3	Chem. 1
3a	History of Breeds and Live Stock Judging.....	4	None
3l	Pedigree Work.....	2	3a
3b	Dairy Stock Judging.....	2	1a, 3a
4a	Feeds and Feeding.....	3	Chem. 1 and 3a
4b	Animal Breeding.....	3	Biology 7a
5a	Pork Production.....	2	1a, 3a, 3l, 4a
5b	Milk Production.....	2	1a, 2b, 3a, 3l, 4a
6a	Horse Production.....	3	1a, 3a, 3l, 4a
6b	Beef Production.....	3	1a, 3a, 3l, 4a
7a	Advanced Live Stock Judging and Practicums.....	3	1a, 1b, 3a, 3l
7b	Advanced Poultry Husbandry.....	3	2a
8a	Creamery Work and Dairy Mechanics.....	4	2b
8b	Mutton and Wool Production.....	3	1a, 3a, 3l, 4a
9	Thesis.....	1-4	†

†See statement.

1a. **LIVE STOCK JUDGING.**—Scoring and judging of breed types of horses, cattle, sheep, and swine. Breed characteristics are given special attention. Placings are made according to breeders' and show yard standards. Animals from the college herds, supplemented by livestock owned by neighboring livestock breeders, are used for class work. Lectures and recitations one hour, laboratory practice six hours per week.

MR. SANDHOUSE.

1b. **LIVE STOCK JUDGING.**—Show yard judging of breed types and market classes of horses, cattle, sheep, and swine; classification of animals in the show ring; comparative and competitive judging, including trips to large herds in different sections of the country. Members of the class are required to spend several days attending county and state fairs judging live stock. This course is designed to select and train a judging team for the International Livestock Show. Laboratory practice six hours per week.

PROFESSOR DVORACHEK.

MR. SANDHOUSE.

2a. **POULTRY HUSBANDRY.**—The principles of the following subjects will be studied in the order given: breeds, housing, feeding, breeding, incubation and brooding, poultry products, diseases, and management. The course will consist of lectures and recitations three hours per week, supplemented by collateral readings, including reviews of experimental work done in poultry husbandry by various experiment stations.

MR. STOUT.

2b. **FARM DAIRYING.**—A study of the secretion and composition of milk, causes of variation in composition, abnormal milk and its causes, bacteria in milk products, the lactometer, milk adulteration, milk preservatives, the various methods of cream separation, farm butter-making, and proper handling of milk and its products on the farm. The laboratory exercises include testing milk and its product, the operation of different kinds of separators, and farm butter-making. Lectures and recitations one hour, laboratory practice six hours per week.

MR. HERZER.

3a. **HISTORY OF BREEDS AND LIVE STOCK JUDGING.**—A brief study of the origin, history, and development, breed characteristics and adaptation of the more important breeds of horses, cattle, sheep, and swine; practice in scoring and judging market classes of

horses, cattle, sheep, and swine, including score card work and comparative judging. Lectures and recitations two hours, laboratory practice six hours per week.

MR. SANDHOUSE.

3l. PEDIGREE WORK.—The library of herd register books will be used for this work. Students are taught the use of these books in the writing of extended pedigrees. Methods and forms of registration and transfer of pure bred animals are studied. Laboratory practice four hours per week.

MR. STOUT.

3b. DAIRY STOCK JUDGING.—Show yard judging of dairy cattle, classification of animals in the show ring, and comparative judging. Trips are made to large herds owned by neighboring dairy-men and other herds in the state. This work is designed to select and train a judging team for the National Dairy Show. Laboratory practice six hours per week.

PROFESSOR DVORACHEK.

4a. FEEDS AND FEEDING.—A study of the principles of animal nutrition; digestibility of feeds; composition, feeding values and preparations of feeds; construction and use of silos; selection of feeds for balanced rations; and the economical feeding of all farm animals for various purposes. Lectures and recitations three hours per week.

PROFESSOR DVORACHEK.

4b. ANIMAL BREEDING.—A study of the principles of animal breeding; reproductive organs; the various systems of animal breeding; and the application of the principles of genetics to practical animal breeding. Lectures and recitations three hours per week.

PROFESSOR DVORACHEK.

5a. PORK PRODUCTION.—An advanced course in swine farm management both from the standpoint of the general and the special breeder. Economy of production is emphasized. Famous individuals and families of the various breeds are studied. The selection, feeding, breeding, housing, pasturing, care, and management of the herd are treated at length. Problems in management are assigned. Lectures and recitations two hours per week, supplemented by collateral readings of experimental data.

MR. SANDHOUSE.

5b. MILK PRODUCTION.—An advanced course in dairy farm management, both from the standpoint of the general and the

special dairymen. The breeds are considered with special reference to famous individuals and families in the show ring, in production, and as breeders. Selection, breeding, feeding, housing, record keeping, pasturing, care, and management are considered at length. Problems in management are assigned. Lectures and recitations two hours per week, supplemented by collateral reading of experimental data.

PROFESSOR DVORACHEK.

6a. HORSE PRODUCTION.—An advanced course in horse farm-management both from the standpoint of the general and the special breeder. The breeds are considered with special reference to famous individuals in the show ring and in the breeding stud. Selection, feeding, stabling, grooming, and training of horses; care and management of stallions, mares, and colts; feeding the horse when idle, and at medium or heavy work. Problems in management are assigned. Lectures and recitations three hours per week, supplemented by collateral reading of experimental data.

PROFESSOR DVORACHEK.

6b. BEEF PRODUCTION.—An advanced course in beef cattle farm management both from the standpoint of the general and the special breeder. Famous individuals and families in the show ring or as breeders are considered. The most approved methods of selection, breeding, feeding, housing, marketing, care, and management for economical production of beef, are discussed at length. Problems in management are assigned. Lectures and recitations three hours per week, supplemented by collateral reading of experimental data.

MR. SANDHOUSE.

7a. ADVANCED LIVESTOCK JUDGING AND PRACTICUMS.—An advanced course in judging of breed types and market classes of horses, cattle, sheep, and swine. Trips are planned to stock farms in order to study large herds of the well known breeds. The practicums include instruction and practice in fitting animals for the show, making rope halters, splicing rope and handling all classes of live stock. This course is designed to train men in the handling of live stock on the farm and in the show ring. Laboratory practice nine hours per week.

PROFESSOR DVORACHEK.

MR. SANDHOUSE.



7b. **ADVANCED POULTRY HUSBANDRY.**—An advanced course in poultry husbandry, including practical experience in the poultry plant. Lectures and recitations one hour, laboratory practice six hours per week.

MR. STOUT.

8a. **CREAMERY WORK AND DAIRY MECHANICS.**—A complete course in creamery management, including practice in the operation of a creamery and the making of butter, cheese, and ice cream; pasteurization; pure culture starters; cream-ripening; cream-grading; churning, working, printing, and marketing butter. Shop practice with steam engines, boilers, artificial refrigeration machinery, creamery machinery, pipe-fitting, and belt-lacing. Lectures and recitations two hours, laboratory practice six hours per week.

MR. HERZER.

8b. **MUTTON AND WOOL PRODUCTION.**—An advanced course in sheep farm management both from the standpoint of the general and the special breeder. Famous individuals and families in the show ring or as breeders are considered. The most approved methods of selection, breeding, feeding, housing, marketing, care, and management for the economical production of mutton and wool are discussed at length. Problems in management are assigned. Lectures and recitations three hours per week, supplemented by collateral reading of experimental data.

MR. STOUT.

9. **THESIS.**—Seniors who choose their major subject in animal husbandry are required to submit an acceptable research thesis equivalent to not less than one nor more than four credit hours.

PROFESSOR DVORACHEK.

## BACTERIOLOGY AND PATHOLOGY

ASSISTANT PROFESSOR MCARTHUR

### COURSES

No	Title	Credits	Prerequisites
1b	General Bacteriology.....	5	Chemistry 1
2a	Household Bacteriology.....	5	Chemistry 1
3a	Dairy Bacteriology.....	3	1b
4b	General Hygiene .....	2	None
5b	Immunity and Serum Therapy.....	3	1b

1b. GENERAL BACTERIOLOGY.—Designed to give an understanding of the morphology, physiology, and classification of bacteria, with a study of the relation of bacteria to disease and to various agricultural processes, including a training in laboratory methods. Lecture three hours and laboratory four hours per week.  
ASSISTANT PROFESSOR MCARTHUR.

2a. HOUSEHOLD BACTERIOLOGY.—Introductory work in bacteriology will be taken up followed by a study of sanitation and the relation of bacteria, yeasts, and molds to the home. Lecture three hours and laboratory four hours per week.  
ASSISTANT PROFESSOR MCARTHUR.

3a. DAIRY BACTERIOLOGY.—A study of the bacterial content of milk, butter, cheese, and various dairy products, and of the use of bacteria in commercial dairying. Lectures two hours and laboratory two hours per week.  
ASSISTANT PROFESSOR MCARTHUR.

4b. GENERAL HYGIENE.—A study of the general principles of hygiene and sanitation. Lecture and demonstration two hours per week.  
ASSISTANT PROFESSOR MCARTHUR.

5b. IMMUNITY AND SERUM THERAPY.—Designed for advanced students. A special study of infection, immunity, and the preparation of vaccines, serums, and antitoxins. Lectures and demonstrations three hours per week.  
ASSISTANT PROFESSOR MCARTHUR.

## ENTOMOLOGY

ASSISTANT PROFESSOR BECKER

The courses in entomology are designed to give the student an insight into the subject either from an economic or from a biological standpoint.

### COURSES

No	Title	Credits	Prerequisites
1a	General Entomology.....	3	None
2b	Economic Entomology.....	2	1a
3a	Morphology of Insects.....	3	†
4a, 4b	Elementary Systematic Entomology.....	3	1a or 3a
5b	Advanced Systematic Entomology.....	3	1a or 3a, 4a, 4b
6a, 6b	Advanced Economic Entomology.....	3	1a, 2b
7a	Biological Entomology.....	3	1a
9a, 9b	Thesis.....	1-4	1a, 6a, 6b, 7a, †

†See statement.

1a. GENERAL ENTOMOLOGY.—A study of the morphology, habits, and classification of insects. Lectures and recitations two hours, laboratory practice three hours per week.

ASSISTANT PROFESSOR BECKER.

2b. ECONOMIC ENTOMOLOGY.—A study of the various economically important insects and critical phases of their life histories, methods of control, and insecticides and the theory of their application. Lectures and recitations two hours per week. Laboratory exercises in the compounding and application of insecticides are taken up jointly with the Department of Plant Pathology in course 3l. Students are advised to take Plant Pathology 3b and 3l in conjunction with Entomology 2b.

ASSISTANT PROFESSOR BECKER.

3a. MORPHOLOGY OF INSECTS.—This course takes up in more detail the laboratory work of general entomology and is designed for advanced students. Course 1a must accompany or precede it. This course may be substituted for the laboratory in course 1a.

ASSISTANT PROFESSOR BECKER.

4a, 4b. ELEMENTARY SYSTEMATIC ENTOMOLOGY.—A laboratory study of the wing venation of insects and of the grosser distinguishing characteristics used in classifying insects.

ASSISTANT PROFESSOR BECKER.

5b. ADVANCED SYSTEMATIC ENTOMOLOGY.—A laboratory study of the finer distinguishing characteristics in classifying insects, designed as a continuation of course 4a (or b).

ASSISTANT PROFESSOR BECKER.

6a, 6b. ADVANCED ECONOMIC ENTOMOLOGY.—A laboratory study of methods used in investigating economic insects.

ASSISTANT PROFESSOR BECKER.

7a. BIOLOGICAL ENTOMOLOGY.—A study of the variation of the life processes and of the morphological adaptations of different insects. Lectures and recitations two hours, laboratory practice three hours per week.

ASSISTANT PROFESSOR BECKER.

9a, 9b. THESIS.—Seniors who choose their major in entomology are required to submit an acceptable research thesis equivalent to not less than one nor more than four credit hours.

ASSISTANT PROFESSOR BECKER.

## HOME ECONOMICS

MISS PECK, MISS METZGER

## COURSES

No.	Title	Credits	Perequisites
1	Presentation of Home Economics.....	6	10, 30
10	Elementary Cooking.....	6	Chem. 1
11	Advanced Cooking.....	6	10
20	Dietetics .....	6	10, Chem. 1
21b	Social Work and Home Economics.....	2	†
25	House Architecture.....	4	Chem. 1
30	Elementary Sewing.....	6	None
31	Advanced Sewing.....	6	30
32	Millinery .....	4	30
34b	Textiles .....	2	Chem. 1
40a	Household Decoration.....	2	Art 2
41	Canning Club and Demonstration Work.....	6	10
45a, 45b	Thesis .....	4	†
46a	Household Management .....	2	None

†See statement.

1. PRESENTATION OF HOME ECONOMICS.—A treatment of the methods of teaching domestic science and domestic art. Complete lesson plans are made out and submitted to the class and the instructor for criticism. Lectures and recitations one hour, laboratory practice four hours per week.

MISS PECK.

10. ELEMENTARY COOKING.—A study of the selection, manufacture, and preparation of foods, including the serving of simple menus. Marketing and economy are emphasized. Laboratory practice six hours per week.

MISS PECK.

11. ADVANCED COOKING.—Instruction and practice in planning menus, purchasing foods, and preparing and serving luncheons, varying in cost from three cents to one dollar. Some idea of institutional management may be gained from this course. Lectures and recitations one hour, laboratory practice four hours per week.

MISS PECK.

20. DIETETICS.—Theoretical and practical instruction in nutrition, including the serving of menus planned according to the laws of nutrition and the preparation of balanced and special dietaries. A course in home nursing is included. Lectures and recitations three hours per week.

MISS PECK.

21b. SOCIAL WORK AND HOME ECONOMICS.—A study of sociology and heredity as related to the problems of the social worker; a detailed consideration of dietetics in relation to infant mortality and malnutrition; a brief treatment of the relation of social conditions to morality. This course is open only to seniors or to juniors in the three-year course in the College of Education. Lectures and recitations two hours per week.

MISS PECK.

25. HOUSE ARCHITECTURE.—A course in planning the home, including a detailed study of plumbing, heating, lighting, and ventilating. Laboratory practice six hours per week.

MISS PECK.

30. ELEMENTARY SEWING.—Practice in hand sewing in plain and ornamental stitches, darning and patching; drafting simple patterns and adapting commercial patterns; the care and use of the sewing machine and simple machine problems. Each student is required to make complete undergarments, including both hand and machine-made, and a linen or cotton dress. Laboratory practice six hours per week.

MISS METZGER.

31. ADVANCED SEWING.—Drafting patterns; designing and constructing winter and spring dresses; instruction in the principles, technique, and application of costume design. Laboratory practice six hours per week.

MISS METZGER.

32. MILLINERY AND ART NEEDLEWORK.—Constructing and covering wire and buckram hat frames; bows and flowers and the renovating of materials for hat trimming; practical exercises in making fall and spring hats; and instruction in the various types of art needlework. Lectures and recitations one hour, laboratory practice three hours.

MISS METZGER.

34b. TEXTILES.—Source of supply, structure, manufacture, and relative value of fabrics and methods of determining their adulteration. Lectures and recitations two hours per week.

MISS METZGER.

40a. HOME FURNISHING AND DECORATION.—The principles of design and color applied to interior decoration; problems in the cost and selection of floor and wall finishes, hangings, floor coverings, and furniture; economy, style, and appropriateness in home furnishings. Lectures and recitations two hours per week.

MISS METZGER.

41. CANNING CLUB AND DEMONSTRATION WORK.—One practical lesson and one demonstration by a member of the class each week. Students registered in this course may be called upon for extension service within the county or to provide demonstrations for the Home Economics Club. Each member of the class will be required to give at least one public demonstration during the semester. Laboratory practice six hours per week.

MISS PECK.

45a, 45b. THESIS.—A thesis in the field of the student's major subject is required of all seniors who are candidates for a degree. The course will require monthly conferences with the instructor with a full report of the work done. This course may be elected in either the first or second semester of the senior year.

MISS PECK.

MISS METZGER.

46a. HOUSEHOLD MANAGEMENT.—A detailed study of the methods of managing the various duties of the household, including labor saving devices, household accounts, and similar topics. Lectures and recitations two hours per week.

MISS PECK.

## HORTICULTURE

PROFESSOR WICKS, ASSISTANT PROFESSOR HEARD

The courses in horticulture may be grouped under five distinct subjects: pomology; small fruit culture; vegetable gardening; floriculture; and landscape gardening.

### COURSES

No.	Title	Credits	Prerequisites
1b	Plant Propagation and Culture.....	3	None
2	Practical Pomology.....	8	1b
3a	Small Fruit Culture.....	3	1b
4a	Systematic Pomology.....	2	1b, 2, 3a
5b	Vegetable Gardening.....	3	1b, 2, 3a
6	Seminar .....	2	1b, 2, 3a, 4a
7a	Commercial Pomology.....	3	1b, 2, 3a, 4a
8b	Landscape Gardening.....	2	1b, 2, 5b
			M. E. 7, †
9	Thesis .....	1-4	†
10a	History and Evolution of Horticultural Plants.....	3	1b, 2, 3a
11a	Nut Culture .....	1	1b, 2, 3a, 7a

†See statement.



1b. **PLANT PROPAGATION AND CULTURE.**—A study of the methods used in the greenhouse and nursery for the multiplication of plants and of the common practices and problems of orchard and garden. Lectures and recitations two hours, laboratory practice two hours per week.

ASSISTANT PROFESSOR HEARD..

2. **PRACTICAL POMOLOGY.**—A study of the general and fundamental principles of fruit-growing with practical problems in handling commercial orchards. The student is expected to become skillful in planting, pruning, thinning, harvesting, and packing. Lectures and recitations three hours, laboratory practice two hours per week.

ASSISTANT PROFESSOR HEARD..

3a. **SMALL FRUIT CULTURE.**—A study of the small fruits, such as the strawberry, blackberry, raspberry, currant, gooseberry, and dewberry, with reference to their history, classification, propagation, planting, pruning, enemies, harvesting, and marketing. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR HEARD..

4a. **SYSTEMATIC POMOLOGY.**—A study of the description, nomenclature, and classification of our common fruits, with practice in fruit judging and displaying. Comparison is made of varieties of fruits from different states. Lectures and recitations one hour, laboratory practice two hours per week.

ASSISTANT PROFESSOR HEARD..

5b. **VEGETABLE GARDENING.**—Classifying, cultivating, handling, and marketing vegetables from both a home and a market garden standpoint. Lectures and recitations two hours, laboratory practice two hours per week.

ASSISTANT PROFESSOR HEARD..

6. **SEMINAR.**—One lecture a week on technical work dealing with special problems, designed for advanced students.

PROFESSOR WICKS.

7a. **COMMERCIAL POMOLOGY.**—A course dealing with problems of packing, marketing, transporting, storing, forming fruit growers' associations, and handling by-products. Lectures and recitations two hours, laboratory practice two hours per week.

PROFESSOR WICKS.

8b. **LANDSCAPE GARDENING.**—A study of the elementary principles in the selection and arrangement of trees and plants for beautifying private and public grounds. This course is open only to seniors. Lectures and recitations one hour, laboratory practice two hours per week.

ASSISTANT PROFESSOR HEARD.

9. **THESIS.**—Seniors who choose their major subject in horticulture are required to submit an acceptable research thesis equivalent to not less than one nor more than four credit hours.

PROFESSOR WICKS.

10a. **HISTORY AND EVOLUTION OF HORTICULTURAL PLANTS.**—A study of the history and evolution of horticultural plants with special reference to trees and small fruits. Lectures and recitations three hours per week.

ASSISTANT PROFESSOR HEARD.

11a. **NUT CULTURE.**—A study of the pecan, walnut, almond, and filbert, with reference to their history, classification, and propagation, and the methods of planting, pruning, harvesting, curing, and marketing. Leading commercial varieties of the different nuts, especially the pecan, will receive special attention. Lectures and recitations one hour per week with occasional laboratory periods.

ASSISTANT PROFESSOR HEARD.

## PLANT PATHOLOGY

PROFESSOR HEWITT, MR. FIELDS

### COURSES

No.	Title	Credits	Prerequisites
1a	Mycology .....	4	Biology 2
2b	Plant Pathology .....	4	1a
3b	Diseases of Plants .....	3	Biology 2
31	Fungicides and Insecticides.....	1	†
4b	Bacteria in Relation to Plant Disease.....	3	1a or 3b, and Bact. 1b
5a	Diseases of Trees.....	3	1a or 3b
9	Thesis .....	1-4	1a, †

†See statement.

1a. **MYCOLOGY.**—A study of morphology of typical fungus forms and the classification of fungi, including a brief consideration of the allied groups of lower plants. Lectures and recitations two hours, laboratory practice six hours per week.

PROFESSOR HEWITT.

2b. PLANT PATHOLOGY.—A study of diseases of plants in relation to parasites and environment; conditions inducing disease and the reaction of the diseased organism. Lectures and recitations two hours, laboratory practice three hours per week. The equivalent of one hour per week is spent in summer field work.

PROFESSOR HEWITT,

MR. FIELDS.

3b. DISEASES OF PLANTS.—A study of the more important fungous and bacterial diseases of crop plants, their characteristics and control. Lectures and recitations two hours, laboratory practice three hours per week.

PROFESSOR HEWITT.

MR. FIELDS.

3l. FUNGICIDES AND INSECTICIDES.—A study of the more widely used spraying mixtures and disinfecting and fumigating materials and methods of using them. This course consists of laboratory exercises designed to accompany course 3b, and is conducted jointly with the Department of Entomology. Students are advised to take Entomology 2b in conjunction with this course. Laboratory practice three hours per week.

PROFESSOR HEWITT.

ASSISTANT PROFESSOR BECKER.

4b. BACTERIA IN RELATION TO PLANT DISEASE.—Cultural and morphological studies of bacteria causing plant disease; infection experiments. Lectures and recitations two hours, laboratory practice three hours per week.

PROFESSOR HEWITT.

5a. DISEASES OF TREES.—A study of the diseases of economically important forest trees; the causes of decay in timber. Lectures and recitations two hours, laboratory practice three hours per week.

PROFESSOR HEWITT.

9. THESIS.—Seniors who choose their major in plant pathology are required to submit an acceptable research thesis equivalent to not less than one nor more than four credit hours.

PROFESSOR HEWITT.

## VETERINARY SCIENCE

PROFESSOR GOW, MR. CALDWELL

## COURSES

No.	Title	Credit	Prerequisites
1a	Veterinary Science.....	3	None
1b	Veterinary Science.....	3	1a

1a. VETERINARY SCIENCE.—A general study of the anatomy of the horse and the comparative anatomy of other domesticated animals. A brief review of general and comparative physiology; pathology and materia medica; methods of restraint and anesthetics. Lectures and recitations two hours, laboratory and clinic four hours per week.

MR. CALDWELL.

1b. VETERINARY SCIENCE.—A general study of dentistry and the methods of age determination; contagious and infectious diseases, their causes, symptoms, and prevention; lameness, its cause, diagnosis, prevention, and cure; hygiene and disinfection; obstetrics; state and federal livestock regulation; simple surgery. Lectures and recitation two hours, laboratory and clinic four hours per week.

MR. CALDWELL.

## AGRICULTURAL EXPERIMENT STATION

### PURPOSE

The purpose of the Experiment Station is to determine facts work out problems, and make investigations that have a bearing upon the agriculture of the state and the country in general. The results of investigations are published in bulletin form and distributed free. All information in possession of the various departments of the institution is available to citizens of the state upon demand. The farmer is in this way relieved of the time, labor and expense involved in working out experiments for himself. He also receives the benefit of facts that only the best trained specialists are capable of determining. Practically all of the agricultural information that we possess and put into practice is based upon experiment station effort.

### STAFF

The working staff of the Experiment Station is practically identical with teaching force of the College of Agriculture. The same persons are required to do both teaching and research work in their respective fields. The work of the Station is continuous throughout the year. Research work constitutes the major burden of the staff.

### DEPARTMENTS

The *Department of Agronomy* carries on investigations with farm crops, testing and breeding new and pure varieties of cotton, corn, grains, grasses for hay, pasture, and cover, and other agricultural crops. It also conducts experiments in soil fertility and the management of soils for different crops. This work is carried on at the experimental farms at the main station and sub-stations. A special feature is the work with cotton and corn at the substations of the southern part of the state.

The *Department of Animal Husbandry* carries on investigations in feeding, breeding, and care of farm animals, including poultry. Its special feature is a well-selected herd of hogs, rep-

representing several breeds, on which various feeding and breeding tests are made. In connection with this department is a model dairy, equipped with improved dairy machinery and laboratories. The dairy is conducted on an economic basis.

The *Department of Bacteriology* conducts investigation and research relative to the causes and character of animal diseases and means of combating them.

The *Department of Agricultural Chemistry* carries on investigations in the application of chemistry to agriculture. Its laboratories are fitted with improved modern apparatus.

The *Department of Entomology* conducts investigations in life histories of insects injurious to agriculture and methods of exterminating such insects. Orchard nursery inspection is a feature of the work.

The *Department of Horticulture* is equipped with a greenhouse, in which forcing experiments and other experiments in plant propagation are carried on. The orchards and grounds in charge of this department contain many varieties of apples, pears, plums, cherries, and small fruits, which serve as material for experiments with varieties, methods of culture, pruning, and spraying.

The *Department of Plant Pathology* carries on investigations of plant diseases with reference to their nature, cause of development, and means of combating and eradicating them. The department is equipped with excellent apparatus for its investigations.

The *Department of Veterinary Science* supervises state inspection for contagious diseases of animals and for the eradication of cattle tick; it investigates also the best means of checking and stamping out diseases of animals.



## DIVISION OF EXTENSION

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### ADMINISTRATION

\*J. H. MILLER, *Director.*

W. C. LASSETTER, *Acting Director in Charge of Specialists.*

C. W. WATSON, *State Agent in Charge of Demonstration Work.*

B. C. RILEY, *Editor of Publications.*

### SPECIALISTS

\*MARCELLA ARTHUR, *Home Economics.*

\*W. A. DENMAN, *Tick Eradication.*

LAWRENCE FOOT, *Meat Packing.*

J. E. GIBSON, *Hog Cholera Control.*

V. H. KERN, *Farm Machinery.*

\*EARL KILPATRICK, *Farm Crops.*

J. S. KNOX, *Horticulture.*

J. H. MCLEOD, *Animal Husbandry.*

A. D. MCNAIR, *Farm Management.*

J. F. NICHOLSON, *Marketing.*

J. B. PARKER, *Dairy Husbandry.*

LOUIS SAWYER, *Animal Husbandry.*

ISABELLE THURSBY, *Home Economics.*

### FARM DEMONSTRATION

EMMA ARCHER, *State Home Demonstration Agent.*

J. C. BARNETT, *District Agent.*

R. C. DAVIDSON, *District Agent.*

W. J. JERNIGAN, *State Boys' and Girls' Club Agent.*

F. KAPP, *District Agent.*

J. E. MCKELL, *District Agent.*

H. K. SANDERS, *Pig Club Agent.*

RHEA SCOTT, *Assistant State Home Demonstration Agent.*

S. P. WEIGART, *District Agent.*

H. C. RAY, *(Colored), District Agent.*

MARY RAY, *(Colored), District Agent.*

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\*Resigned.

## AGRICULTURAL EXTENSION SERVICE

**PURPOSE.** The leading purpose of all colleges and universities, until within the last quarter century, was to educate a few boys and girls of the best classes of society for the scholarly or professional vocations. Until very recently the public did not expect even its own public educational institutions to perform any service beyond the teaching of those who voluntarily sought instruction within their walls. A broader and nobler idea has recently influenced the activities of state universities and colleges, namely, that of serving all of the people. The College of Agriculture desires to extend its campus to the limits of the state and for that reason the Division of Agricultural Extension was organized.

**SOURCES OF MAINTENANCE.** The Division of Agricultural Extension is supported jointly by the College of Agriculture of the University of Arkansas and the United States Department of Agriculture under the provisions of the Smith-Lever Act passed by Congress in June, 1914. In addition to the federal funds appropriated by the College of Agriculture for conducting extension work, and the state funds appropriated as an off-set to the federal appropriations, the Department of Agriculture, through the States Relation Service, has allotted to the Division of Extension certain sums to be used in the furtherance of the work.

**SCOPE OF WORK.** The Division of Agricultural Extension endeavors to reach the maximum number of people throughout the state and for that purpose several lines of activities are planned. Among these are the county agent work, the home demonstration agent work, boys' and girls' club work, home economics study clubs, farm meetings, marketing service, farmers' clubs, farm schools, cooking school, curing and marketing of meats, farm management, and personal instruction on the part of specialists in the various lines of agricultural study. The basis of agricultural extension work is actual practical demonstrations since this has been found through experience to be the most effective method. This applies also to other phases of extension work.

**COUNTY AGENTS.** The farm demonstration work is conducted through the organization of county agents who are made responsible for the agricultural interests of the counties to which

they are assigned, and whose duty it is to conduct demonstrations in the growing of the various farm crops adapted to the county, in the introduction, care, and management of live stock, in farm management, in marketing, in the organization of community clubs for the promotion of community betterment work, in conducting boys' corn, cotton, peanut, and pig clubs, and for the giving of instruction in any other way advisable and effective in their counties.

**COUNTY HOME DEMONSTRATION AGENTS.** For this work, women trained in home economics and having ability in dealing with household problems and matters affecting the home are employed, according to the plan of the county agents' work. Their duties lie in giving instruction in those things pertaining to the welfare of the home. They organize girls' tomato and garden clubs, teach women and girls to can the fruits and vegetables, organize women's home demonstration clubs and through these organizations teach the best methods pertaining to home work. Their entire work looks to the welfare of the homemakers through giving instruction in good housekeeping.

**BOYS' AND GIRLS' CLUBS.** Specialists in club work are provided for the proper supervision of the boys' and girls' club work and to assist the county agents and home demonstration agents in organizing and properly developing this work. This service is designed to teach the boys and girls the simplicity of ways for improving the farm and home, to open up to them a brighter view of the future and to inspire them with the desire to remain on the farm and develop it to its fullest possibilities. This may be classed as the initial step in the teaching of agriculture in that it reaches the boys and girls between the ages of ten and eighteen before they have had the opportunity to secure such training in the schools and colleges.

**SPECIALISTS.** The county agents and home demonstration agents are required to serve the people on all problems, and their training, therefore, must be general. Since this prohibits a high degree of specialization, it is necessary to supply assistance through men trained in more highly specialized fields. This service to the county agents is necessary to enable them to handle some of the more difficult problems of their counties. Specialists, therefore, are supplied in livestock, soils and crops, horticulture, and home economics.

**FARMERS' MEETINGS.** In season it is intended that the extension service through farmers' meetings shall reach every county in the state. During the past year 458 farmers' meetings were held with an attendance of 43,000. Special campaigns along lines of greatest importance are organized and promoted in season. This work is pushed at times when farm work is the lightest.

**MARKETING SERVICE.** In co-operation with the Office of Markets and Rural Organization, a specialist in marketing is provided to assist farmers in securing markets for their products. This service is designed to bring the producer and the buyer into touch with each other, but the Division of Extension takes no further part in consummating sales. The marketing service goes further in that it encourages the organization of groups of farmers for the production of various products in carload lots and gives instruction in the proper grading and packing of fruits and other farm products. During the fall, special assistance is detailed by the Office of Markets for the purpose of grading and classifying cotton for the benefit of the farmers. The marketing of any farm product will be included in the activities of this sphere of extension work.

**CURING AND MARKETING OF MEATS.** A specialist in the Division of Extension has given instruction to ice plants in the state and assisted them in so arranging their plants as to utilize waste space in the curing of meats and has instructed them in the best methods for this purpose. This has opened a market for the small farmer and in this way has encouraged a greater production of hogs.

**LIVESTOCK INTRODUCTION.** Because of certain economic factors not under control, the class of livestock in Arkansas has been decidedly poor. With the control of the disturbing factors, the necessity arose for the introduction of pure-bred breeding stock. The livestock specialists have turned their attention to that matter and through special organization work in many counties have introduced many carloads of good breeding stock, and through farmers' meetings, the press, and otherwise, have developed a strong public sentiment in favor of this work. The boys' pig club work is one of the greatest factors in the introduction of pure-bred hogs.

**FARM MANAGEMENT.** Preliminary surveys of farms in some

sections of the state have shown that the profits are far from what they should be. Farm management studies naturally should be one of the foremost of agricultural teachings. Proper investigation of farm management conditions and the teaching of the best methods of farm management are of utmost importance. This work is provided for through the employment of a specialist in farm management.

**HOME ECONOMICS.** A very far reaching piece of extension service is the organization of home economics study clubs in the villages and small towns or in the country where a group of girls or women may form a club to meet regularly for the discussion of certain problems previously assigned for home practice. Lessons are sent from the office of the Division of Extension each week and reports are sent back after each meeting. The importance of this work cannot be over-estimated.

Two-day cooking schools in home economics, where instruction in matters of great importance to the housekeeper is given, are held by specialists in this field. These schools are available to any community in the state upon request.

**FARM IMPLEMENTS.** Economy in any business undertaking demands the use of labor-saving machinery of the most approved type. A specialist, therefore, is provided to make a careful survey of each of the sections of the state with a view to determining the types of farm implements of greatest economic value to those sections, and for giving instruction in the use of machinery of these improved types. This service will be extended to the farmer through demonstrations and to the retail dealers as well.

**AGRICULTURAL NEWS SERVICE.** Agricultural facts must be placed before the people. The Arkansas press affords one of the most effective means for reaching the greatest number of people. The co-operation of the press is utilized through supplying to the three hundred twenty-five papers of the state weekly paragraphs on better farming. In addition to this, one hundred twenty papers of the state receive one column of agricultural material each week set up in plate form, ready to print. Special articles dealing with seasonal topics are prepared for the county papers. Special articles for the daily papers of the state are prepared in order that facts may be brought before a large number of people. Further than this, the Division

of Extension issues publications from time to time which are available to the people of the state upon application.

#### ENGINEERING EXTENSION SERVICE

There are many ways in which the College of Engineering might be of invaluable service to the state if funds were provided for specialists to devote their time solely to public service. As far as college work will permit, however, public service will be offered, free except for traveling expenses, in inspecting light and water plants, power plants, mills and factories, and heating plants for school and other public buildings. Visits will be made to examine drainage problems; plans and specifications furnished for culverts and small bridges; and service rendered for investigating water power possibilities for towns and cities. Information and advice will be freely given on any and all engineering and industrial problems.

#### CORRESPONDENCE STUDY SERVICE

Through this department, the University will strive to reach two great classes of people; thoughtful men and women desirous of more education, but unable to avail themselves of the greater advantages of residence study at the University; and a large body of young people who are ambitious to have a college education, but who are not able to complete a high school course in residence in order to prepare for it.

Correspondence study courses are prepared for:

1. Students preparing for college or professional schools, who lack certain entrance requirements.
2. College students who are unable to live in residence during some part of their four year course.
3. Teachers of the public schools of the state who have had little normal school work or college training and who wish to take this means of preparing themselves for better places in their profession.
4. Professional and business men who wish to supplement their training.
5. Club women who wish to pursue a systematic course of study.
6. Teachers and others who desire to supplement their training or to do work of investigation along some special line.



7. Mechanics, artisans, draughtsmen, and other wage earners who wish to pursue vocational studies in order to increase their efficiency in their life work.

8. Farmers desirous of more knowledge of the problems of agriculture.

9. Ministers who are anxious to enlarge their view and know more of certain subjects that will help them in their work.

10. All those who wish to foster in their lives the element of culture by keeping abreast of the social movements of the time.

A copy of the special bulletin describing correspondence courses more in detail may be had by applying to the Division of Extension.

**HIGH SCHOOL COURSES.**—The extension division will offer some of the preparatory courses usually found in the better high schools of the state. These courses will not only prepare for entrance those who intend to go to college, but will be of just as great value to the young men and women of Arkansas who are going out as active workers without the advantages of college training. These courses are not intended to compete or conflict with the high schools of the state. Their object is to reach, first, those students who reside in rural communities or small towns that do not support first-grade high schools, or persons who for any reason find it impossible to attend their high schools, or to obtain in those high schools certain courses that they desire.

**COLLEGE COURSES.**—A large proportion of the courses offered by the University may be taken by correspondence for college credit. In order to be eligible for a degree, however, the student must take the work of at least the senior year in residence at the University. Exceptions to this rule may be made by the faculty of the college in favor of students who have been in residence at the University one or more years, and have done work of exceptionally high character.

**VOCATIONAL COURSES.**—As the demand for them arises, the University will offer all the industrial courses possible for the benefit of persons engaged in the various vocations, trades, and crafts.

Anyone who desires to take a course not indicated in the bulletin is invited to write to the Division of Extension and

state his wants. Such courses will be given as soon as a sufficient number of applications are received to warrant it.

REGISTRATION.—Application blanks will be sent free of charge to all applicants. These blanks should be carefully filled out and returned to the Division of Extension with the fee or fees required.

FEES.—A fee of five dollars will be charged for each semester course of three hours or less, or ten dollars for each year course of three hours or less, in addition to which the student will pay the return postage on his papers. Fees are non-returnable. All courses listed in the bulletin are semester courses, unless otherwise stated. The fee for a semester course in the College of Agriculture will be four dollars.

REGULATIONS.—1. Students may enroll at any time. Correspondence work will be carried on throughout the year.

2. The average student is expected to complete a semester course in from four to six months, but he has the privilege of completing any such course in less than four months. A semester course must be completed within twelve months from the time of registration.

3. Not more than two courses may be taken by correspondence at one time.

4. College credit is granted only to students who have met the entrance requirements of the University. For unconditioned entrance a student must present fourteen units of high school work. A unit is defined as a high school study pursued for a year with daily recitations of forty-five minutes each; it is further defined as approximately one-quarter of a full year's work in a high school.

5. Students who enroll in correspondence study courses for a university degree must comply with all of the requirements of the college in which such degree is sought.

6. A student doing full work in another institution of learning, either high school or college, will not be permitted to register for correspondence work in the University of Arkansas. This privilege may be allowed to a student of another institution who is doing less than full work therein, but he must first secure the approval of the proper authority of his school.

7. Resident students of the University are not allowed to take correspondence work.

**STUDY CENTERS.**—Just as soon as funds will permit, university extension centers will be organized in connection with correspondence studies. This will be possible only where a sufficient number of students in the same town are taking the same course, to justify the expense of sending a member of the faculty to that town from time to time to lecture on the subject-matter of the course, and to give individual help to the students enrolled. For the time being this can be done only where the students themselves offer to pay the traveling expenses of the instructor.

#### PUBLIC LECTURE SERVICE

Through this department of extension service, the University offers its best talent to the people of the state. Twenty-six members of the faculty offer to go to any part of the state to give one or more lectures on subjects of interest to the people. Requests for lectures should be sent in advance, as convenient circuits may often be arranged for two or more engagements, thus dividing the expense. The Division of Extension will be glad to furnish a part of an entire lecture course for a town or small city with probably far better talent and at much less expense than such a course could be secured in any other way. Requests for entire courses should be filed, if possible, before June 10 of each year, although they will be received at any time. This service is free except for actual expenses. The Division of Extension will send, on application, a special bulletin giving the subjects of lectures offered and the names of the lecturers.

#### GENERAL EXTENSION SERVICE

The University wishes to be of service to all the people but it is recognized that there are many human interests not easily classified. The aim of this department is to investigate and answer questions relating to various problems, educational, agricultural, historical, social, industrial, economic; problems on finance, municipal government, city lighting, city water, sewerage, sanitation, health—in short, all problems that may concern any individual or any community of Arkansas.

**HIGH SCHOOL SOCIETIES.**—Special attention will be given to assisting high school debating teams and literary societies in their work. There has recently been issued a bulletin on high

school debating, in which there is outlined a plan for organizing a state league of debaters. The bulletin contains also much valuable information about methods of choosing a subject, of stating the question, of securing references, a model brief, and other suggestions for young debaters. Copies will be sent free on application to the Division of Extension.

All literary societies, and other organizations such as granges, farmers' unions, and civic clubs, are invited to make free use of the Division of Extension of the University, and all this service will be free. All inquiries relative to any extension or public service should be addressed to the Dean, Division of Extension, University of Arkansas.

# COLLEGE OF MEDICINE

## HISTORY

The College of Medicine was organized at Little Rock in 1879. In 1911 it was consolidated with the College of Physicians and Surgeons and by an act of the general assembly became the College of Medicine of the University of Arkansas.

## ADMISSION

The College of Medicine is co-educational. Admission may be secured either by examination or by certificate.

*Admission by Certificate.* Each candidate for admission must present a certificate showing the completion of at least fourteen acceptable units of high school or preparatory school work prescribed as follows:

English, three units.  
Algebra, one and one-half units.  
Geometry, one unit.  
History, one unit.  
Physics, one unit.

Latin, two units, or French or German, four units, provided a satisfactory examination in the elements of Latin grammar is passed.

Enough additional units to bring the total to fourteen including not more than four in vocational and business subjects. For a description of the subjects accepted for entrance, see page 32.

In addition to the preparatory work required for entrance, the candidate must have completed collegiate courses in physics, chemistry, biology, and German or French.

*Admission by Examination.* Candidates who do not present acceptable credentials are required to stand examinations for entrance. These examinations will cover the subjects required for admission by certificate and will be conducted according to the rules governing examinations for admission to other colleges of the University. The examinations will be held at Little Rock, by the State Superintendent of Public Instruction or his authorized representative.

## COURSE OF STUDY

The College of Medicine offers a four-year course leading to the degree of *Doctor of Medicine* (M. D.).

The candidate must meet the entrance, residence, and registration requirements; must be twenty-one years of age; and must present satisfactory evidence of good moral character. The candidate must have attended and satisfactorily completed four courses of lectures, no two of which shall have been attended in the same calendar year. Three years of the required work may have been done in some other medical college of recognized standing whose requirements are equivalent to those of this college. The senior year must be done in residence at this college.

#### FEEs AND EXPENSES

Tuition Fee, per annum.....	\$125.00
Graduation and Diploma Fee.....	25.00

There are no other fees, but in the first and second year courses in chemistry a ten dollar deposit to cover breakage, is required; in the third year a three dollar deposit is required. After the necessary deductions, the balance of the deposit is refunded.

Board and lodging, including fuel and lights, may be had at a cost of four to six dollars a week or of fifteen to twenty dollars a month.

#### BUILDINGS AND EQUIPMENT

The main building, erected in 1890, is a three-story brick structure containing a lecture hall, amphitheatre, museum, dissecting room, and laboratories. A second building, occupied chiefly by laboratories, has been outgrown, and the east wing of the old state capitol is used for laboratories of chemistry, embryology, histology, physiology, pathology, bacteriology, clinical microscopy, surgical pathology, and pharmacology. These laboratories are well equipped with new apparatus and supplies. The space is ample and the rooms are well lighted.

#### HOSPITAL AND CLINICAL FACILITIES

*Logan H. Roots Memorial Hospital.* This public city hospital was founded by the late Logan H. Roots. Closed corridors connect the hospital with the clinical amphitheatre of the college building. A large medical and surgical dispensary is connected with the hospital.

*Pulaski County Hospital.* This hospital is situated in the southwestern part of the city and has a capacity of two hun-



dred beds. A feature of the hospital is the cottage treatment of tuberculosis. Clinics are held throughout the session.

*University Hospital.* The College of Medicine has perfected arrangements with the University Hospital, by which students will receive instruction. It is well equipped with modern operating rooms and has a capacity of one hundred beds. It has rooms especially arranged for the care of acute nervous and mental diseases and the treatment of inebriety and narcotic habits, and maternity wards for the care of obstetrical cases.

*Isaac Folsom Clinic.* This clinic was named in honor of the late Dr. Isaac Folsom, in consideration of his gift of an endowment of \$20,000. This clinic is under the direct and exclusive control of the faculty, and all its material is available for teaching purposes.

*St. Vincent's Infirmary.* St. Vincent's Infirmary, designed solely for the treatment of acute diseases, has a capacity of nearly two hundred beds. The hospital is splendidly equipped and conveniently situated. It is under the supervision and management of Sisters of Charity who are trained nurses.

*St. Luke's Hospital.* This new hospital for surgical and gynecological cases has been opened recently by a member of the faculty. It is modern in all its appointments.

*State Institutions.* All the eleemosynary institutions of the state are situated in Little Rock. These include the School for the Blind, the School for Deaf Mutes, the State Hospital for Nervous Diseases, the Penitentiary, the Reform School, County and City Hospitals, all of which contribute to the available clinical material.

#### HOSPITAL APPOINTMENTS

The following hospital appointments are made annually: Logan H. Roots Memorial Hospital, two resident physicians; University Hospital, two resident physicians; St. Vincent's Infirmary, two internes; Pulaski County Hospital, four internes; State Hospital for Nervous Diseases, ten internes. Appointments are made by competitive examinations open to graduates of the College of Medicine.

#### ANNOUNCEMENT

For further information in regard to the College of Medicine, address the Dean of the College of Medicine, University of Arkansas, Little Rock, Arkansas.

# BRANCH NORMAL COLLEGE

## HISTORY

The Branch Normal College is situated at Pine Bluff, Arkansas. It was established pursuant to an act of the general assembly of Arkansas, April 27, 1873, and has been in operation since 1875.

Its purpose is to provide industrial education and to train teachers for efficient service in the colored public schools of the state.

## BUILDINGS AND EQUIPMENT

The school property consists of twenty acres of land in the western suburbs of Pine Bluff.

The buildings include a two-story school building, containing an assembly hall; well equipped mechanical shops; and a dormitory for women.

## ADMISSION

Candidates for admission must be at least thirteen years of age and must pass a satisfactory examination in arithmetic, English grammar, geography, and United States history, such as is covered in the fifth grade. Those coming from other schools must furnish evidence of satisfactory deportment and class standing.

## COURSES OF STUDY

*Preparatory Department.* In the preparatory department the foundation academic subjects are studied. The work corresponds to that of the sixth, seventh, and eighth grade public school.

*Normal Department.* The purpose of the normal department is to prepare students for teaching. Admission is based upon the completion of the preparatory course. Students who pass the prescribed course of study satisfactorily will be awarded a teacher's certificate.

*Industrial Department.* Beginning with the second year in the preparatory department, all students are required to pursue certain industrial courses. The industrial work extends through four years, and the completion of the work is attested by a certificate of efficiency.

Young men do shop work in mechanic arts, carpentry, and cabinet making, and have the opportunity to become skilled blacksmiths, machinists, engineers, or firemen.

Young women are taught plain sewing, cutting and fitting, and art needlework.

*Agricultural Department.* In this department two courses of study are offered, one designed especially for students who are preparing to teach in the public schools, and a second course, for those who wish to specialize in agriculture. The latter course includes work in agronomy, farm economics, and kindred subjects.

#### FEES AND EXPENSES

Matriculation fee (paid annually by all students)-----	\$5.00
Entrance fee (paid annually by all non-resident students and by all others who do not hold beneficiary appointments) -----	5.00
Dormitory fee (including board, fuel, and light, paid by all women students at the beginning of each month)----	8.00
Tuition fee (paid by all students at the beginning of each month)-----	1.00

Beneficiary students may be appointed by the county judge of each county in the state. Students who receive these appointments pay no entrance fee.

#### ANNOUNCEMENT

For further information in regard to the Branch Normal College, address the Superintendent, Branch Normal College, Pine Bluff, Arkansas.

# DEGREES, DIPLOMAS, AND CERTIFICATES

June, 1916

## BACHELOR OF ARTS

Alcorn, Maurice Lee	Lano, Mildred
Arnold, Clara May	Lincoln, Adaline
Brown, Robert Washington	Mathews, Ben B.
Cabeen, Abney Catherine	Matthews, Jim P.
Cammack, George S.	McConnell, Willard W.
Carroll, John Charles	McDonald, Louise
Courson, William Hershia	McKinney, Ruth
Decker, Klerchia	Middlebrooks, Edna
Eld, Ellen Eva	Moore, Lucille
Forrest, Grace	Oliver, James William
Gill, Thomas Tapscott	Osborne, Virginia
Gray, Julius Cornelius	Phillips, Bess Agnes
Harville, William Emerson	Rudd, James T.
Harris, Hadley	Sadler, William Paul
Hilton, Esther	Taylor, Irene Olcott
Hinds, Helen Lois	Tipton, Goodwin
Hunt, Ralph Berry	Wilson, Donald
Irby, Nolan Meaders	Winn, James A.
King, Iler	Womack, Vee
Knerr, Irene	Woodfin, Eugene L.

## BACHELOR OF SCIENCE IN EDUCATION

Alcorn, Merritt Oakney	Sears, Mrs. O. B.
Carolan, H. Clem	Wilkes, James C.
Frazier, Elmer H.	

## BACHELOR OF SCIENCE IN CHEMISTRY

Smith, Harold A.

## CIVIL ENGINEER

Brewer, Mack Hamilton

## ELECTRICAL ENGINEER

Paul, Claude

## BACHELOR OF CIVIL ENGINEERING

Allen, Glenn L.	Lee, Lucas S.
Downs, Roy Richard	Nunn, Henry Edwin
Higgs, Morton Thomas	Payne, Weston
Knoch, Elmo A.	

## BACHELOR OF CIVIL ENGINEERING IN HIGHWAYS

Stevenson, Eberle Upshaw

## BACHELOR OF ELECTRICAL ENGINEERING

Coker, Marion Barrow	Oneal, Lloyd Edwin
Cantrell, Walter T.	Parsons, Lloyd Chandler
Dubs, Ford	Rice, Philip
Ellington, Fred Merton	Wells, George C.
Horton, Horace R.	

## BACHELOR OF MECHANICAL ENGINEERING

Horton, William G.

## BACHELOR OF SCIENCE IN AGRICULTURE

Hall, Willis Legette  
Martin, Ray  
Ridling, LittleRosencrantz, Franklin C.  
Smith, Earl Webster  
Smith, Oscar D.

## CERTIFICATE OF LICENTIATE OF INSTRUCTION

Alcorn, Maurice Lee  
Bell, Lillian Grace  
Bond, George William  
Browne, Sara Hazel  
Buechley, Florence Estelle  
Carolan, H. Clem  
Coffey, Jewell  
Covington, Maxie  
Decker, Klerchia  
Dotson, Ethel  
Frazier, Elmer H.  
Harris, Hadley  
Horton, Gertrude  
Irby, Nolan M.  
Jordan, Kara  
King, Annie M.  
Klausmeier, Ruth  
Middlebrooks, Pearl  
McConnell, Willard W.  
McDonald, LouiseOverton, Minnie  
Park, Effie  
Quaile, Beatrix  
Rainwater, Sloan  
Rodgers, Eunice  
Sailor, Lela Pearl  
Sears, Mrs. O. B.  
Stone, Hilda  
Thompson, J. O.  
Torrence, Julia  
Trimble, James W.  
Vineyard, Mittie  
von Jagersfeld, Evelyn  
Wachter, Virginia  
Wilkes, James W.  
Wilkinson, Margaret  
Williams, Edna  
Winn, James A.  
Womack, Vee  
Woolf, CoraCERTIFICATE OF LICENTIATE OF INSTRUCTION IN HOME  
ECONOMICSColeman, Mae  
Dowell, Gladys  
Fox, LeeoraGordon, Ruth  
Mendenhall, Ruby  
Pendleton, Myrtle

## CERTIFICATE IN MECHANICAL ENGINEERING

Coffield, Henry A.

Church, Maury A.

# UNIVERSITY SCHOLARS

1916-1917

Name	High School	Name	High School
Baker, Helen May	Dermott	Hon, Sarah	Waldron
Bishop, Thelma	Arkadelphia	Husky, H. Watson	Preseott
Blackwood, Chester	Lonoke	Illian, Harry	Russellville
Boyd, Haskell	Jacksonville	Klausmeier, Otto H.	Cabot
Boysen, Mae	Portland	Koonce, Lynne	Fine Bluff
Bridewell, Effie Mae	Hope	Little, Hamilton	Blytheville
Briscoe, Gladys	Harrison	McGill, Sarah	Camden
Cowan, Bohart P.	Rogers	Miller, Fanita	Huntington
Dudley, William B.	Bentonville	Oliver, William	Corning
Eskew, Henry	Augusta	Paslay, Cecil	Moro
Ewart, Alma	West Helena	Smiley, Leona E.	Carlisle
Harder, Thomas L.	Newport	Solomon, Victor	Helena
Hassell, Guthrie	Searcy	Thompson, Newton F.	Clarksville
Hawkins, Luther B.	Atkins	Towler, H. Speight	Fordyce



# LIST OF STUDENTS

1916-1917

## EXPLANATION OF ABBREVIATIONS

A	College of Arts and Sciences
E	College of Engineering
Ag	College of Agriculture
Ed	College of Education
F	Freshman
So	Sophomore
J	Junior
Sr	Senior
Sp	Special
Gr	Graduate
T	Trade Course
Mu	Music
Ar	Art

Name	Course	Home Address
Abrams, Charles W.	E-F	Gurdon
Adams, Anna Grace	A-Sr	Arkadelphia
Agee, Owen Frank	A-F	Ozark
Albright, Chester	Ed-Sr	Fayetteville
Alcorn, J. Oral	Ed-F	Imboden
Alewine, Omar Boyce	A-Sp	Fayetteville
Alexander, Margaret	Ed-F	Little Rock
Allsopp, James E.	E-So	Little Rock
Alter, Glen K.	Ag-Sp	DeWitt
Amos, James W.	A-J	Fort Smith
Anderson, Jessie Earle	A-F	West Fork
Anderson, John C.	Ed-Sp	West Fork
Anderson, Lance Dewey	E-So	Fayetteville
Armstrong, A. B.	A-J	Wynne
Ashley, Louise	A-J	Morrilton
Atkinson, Edwin J.	Ag-J	Star City
Atkinson, Pearl	Ed-F	Nashville
Austin, Russell H.	Ag-Sr	Heavener, Okla.
Ayres, Linnie	Ag-Sp	Fayetteville
Bailey, Frances	Ag-So	Newport
Bain, James O.	A-So	Portland
Bain, Mary	Ed-F	Portland
Baker, Helen May	Ed-F	Dermott
Baker, Henry C.	A-F	Malvern
Barger, James H.	E-F	Hindsville
Barrett, Joe Chifford	A-F	Jonesboro
Barrett, Lois	A-F	Jonesboro
Bartell, Edward D.	A-So	Siloam Springs
Barton, Lov	E-F	Fayetteville
Baskin, Clara	A-F	Fayetteville
Baskin, Gray	Ed-F	Fayetteville
Baumgardner, George M.	E-Sp	Jonesboro
Bayne, Robert E.	A-F	Brinkley
Beard, Samuel J.	Ag-So	Heber Springs
Beauchamp, Elroy H.	E-T	Blevins

Name	Course	Home Address
Beck, Robert W.	Ag-F	Wynne
Belknap, Ray L.	E-So	Sulphur Springs
Bell, Meryl W.	A-F	Greenwood
Bennett, Lucy	Ag-F	Paris, Texas
Benton, Sidney W.	Ag-Sr	Fayetteville
Best, J. Boyd	A-Sr	Newport
Bird, Beverly Ann	Ed-So	Waldron
Bird, Harland D.	Ag-So	Springdale
Bird, Marie	Ed-So	Waldron
Bird, Milmo	E-J	Waldron
Bishop, Mark	A-J	Nashville
Bishop, Thelma	Ed-F	Arkadelphia
Black, Roy Clinton	A-F	Bluff City
Blackmun, Gladys	A-F	Fayetteville
Blackwood, Chester W.	E-F	Lonoke
Blakeslee, Blanche	Ag-F	Fayetteville
Blankenship, Mary	A-F	Pine Bluff
Blanks, Aubrey G.	A-J	Hamburg
Bloom, Clarice	Ed-So	Helena
Blythe, Sidney	E-F	Monticello
Boone, William B.	E-So	Lonoke
Bossemeyer, Clyde O.	E-T	Fayetteville
Boyd, Drury T.	E-J	Carlsbad, N. M.
Boyd, Haskell	A-Sp	Jacksonville
Boysen, Mae	Ed-F	Portland
Bracey, Alfred	A-Sp	Little Rock
Bradley, James	A-So	Jonesboro
Bradley, Maurice M.	E-T	Bristow, Okla.
Bradsher, Thomas A.	Ag-Sp	Harrisburg
Brazil, Ernest	A-F	Bauxite
Brewer, Clarence U.	Ed-So	Fort Smith
Brewer, William	E-So	Fort Smith
Brewster, Lawrence M.	A-F	Cane Hill
Brewster, Marguerite	Ed-F	Pine Bluff
Bridewell, Effie Mae	Ed-F	Hope
Briscoe, Gladys	Ed-F	Harrison
Brown, Hazel	Ed-So	Fayetteville
Browne, Ada L.	Ed-So	Piggott
Browne, Sara Hazel	A-Sr	Fayetteville
Browning, Ethel Mae	A-F	Piggott
Bryant, Louise L.	Ed-F	Texarkana
Buchanan, Alma V.	A-Gr	Stamps
Buchanan, Henrietta E.	Ed-So	Fayetteville
Burke, Ruth Alice	A-Sr	Fort Smith
Burrow, Frederick H.	A-J	Altus
Byrd, Clarissa	Ag-Sp	Lake City
Cabe, Ethel	Ed-Sr	Summers
Cabeen, Catherine	A-Gr	Fayetteville
Cabler, Cleveland	A-J	Fordyce
Callahan, Jean Alice	A-So	Fayetteville
Callahan, Margaret E.	Ag-Sr	Fayetteville
Campbell, Charles M.	Ed-So	Russellville
Campbell, Kate	Ed-J	Fayetteville
Campbell, Martha E.	A-So	Van Buren
Campbell, Robert A.	A-F	Foreman
Campbell, William P.	Ag-Sr	Augusta
Cantrell, George A.	E-J	Bellefonte
Cantrell, William M.	E-So	Bellefonte
Carmichael, Lenten	A-J	Little Rock
Carnall, Frances	Ed-F	Fort Smith
Carroll, Maime	A-F	Fayetteville
Casey, John E.	A-J	Boxley
Chamberlain, Maurice S.	E-Sp	Malvern
Chambers, Wilford L.	A-Sp	Bauxite

## LIST OF STUDENTS

195

Name	Course	Home Address
Cheever, Edwin H.	A-Sr	Richmond
Cherry, Robert M.	E-J	Paris
Cherry, Rufus L.	A-J	Paris
Childers, William L.	E-F	Newport
Chotard, Elizabeth	A-F	Lake Village
Chotard, Robert C.	E-So	Lake Village
Clardy, R. Kelly	A-So	Malvern
Clark, A. Clarence	A-J	Van Buren
Clark, Alvin D.	Ag-F	Ozark
Clark, Glenn	A-So	Malvern
Clark, James A.	Ag-J	Fort Smith
Clark, Richard H.	A-F	Jasper
Clifton, Artie	Ed-F	Russellville
Cochran, Maurice W.	E-Sr	Fayetteville
Cochran, Paul B.	A-So	Fayetteville
Coffey, Elizabeth Lee	Ed-So	Fayetteville
Coffman, Emery	E-T	Gillett
Coker, Edith	Ag-F	Fayetteville
Cole, Nellie Bly	A-So	Charleston
Coleman, Betram E.	Ag-Sp	Little Rock
Coleman, Charles R.	A-F	Little Rock
Coleman, James W.	Ed-So	Strong
Collamore, Loftus J.	E-F	Little Rock
Collins, Clyde	A-So	Fayetteville
Conley, George D.	E-So	Paris
Conner, E. Cornelius	A-F	Augusta
Conner, Laura	A-Sp	Augusta
Cooper, R. A.	A-F	Bigelow
Cotton, Nina	Ed-F	Dardanelle
Cowan, Bohart P.	E-F	Rogers
Cox, Jesse Emmett	A-F	Malvern
Cox, Lester	A-Mu	Elm Springs
Craig, Alfred H.	A-J	Little Rock
Craig, Gladys J.	Ed-So	Hot Springs
Crane, W. Carey	Ed-So	Fort Smith
Cravens, Fadjo	A-F	Fort Smith
Cravens Pauline	A-F	Paris
Cress, Roscoe E.	E-F	Prescott
Crist, Norma A.	Ed-F	Pine Bluff
Crockett, Elizabeth	A-F	Fayetteville
Cross, Guy L.	E-F	Waldron
Crozier, Ruth	Ag-Sp	Fayetteville
Cruce, Sarah Elsa	A-J	Siloam Springs
Curl, Robert	E-T	Malvern
Curnutt, Hugh A.	A-Sr	Harrison
Curtice, Adele	Ed-So	Fayetteville
Curtis, Billie	Ed-F	Fort Smith
Daniel, Fannie	Ed-J	Pigott
Daniels, J. Buford	Ag-J	Dermott
Danner, John F.	E-Sp	Harris
Davidson, Gene	Ed-F	Fort Smith
Davidson, Junius	Ag-So	Marvell
Davis, Emma	A-Mu	Little Rock
Davis, Jeff	A-J	Little Rock
Davis, Ray	A-F	Black Rock
Deane, Katherine	Ed-F	Fayetteville
Decker, Carrie O.	A-F	Fayetteville
Decker, Kivi Kivia	Ed-Gr	Fayetteville
Deen, Margie	A-F	Fayetteville
de Roulhac, Jean	A-F	Fayetteville
Dibrell, Artilla	Ed-So	Van Buren
Donaghe, Lucy	Ed-F	Lincoln
Dorr, Clyde H.	A-So	Jonesboro
Douthit, Jesse C.	E-J	Stephens

Name	Course	Home Address
Douthit, Myra	Ed-F	Stephens
Dowell, Gladys	Ag-J	Fayetteville
Dudley, William B.	E-F	Bentonville
Dudney, William Cross	Ed-So	Magnolia
Dyer, Frances	Ag-J	Fayetteville
Dyer, Julian M.	Ag-J	Fayetteville
Easley, Fred	Ag-Sp	Little Rock
Edwards, Clyde N.	Ed-F	Bald Knob
Eichelburger, Mark W.	Ed-F	Soudan
Eichelburger, Orion H.	Ed-So	Soudan
Ellis, Catherine	Ed-F	Fayetteville
Ellison, Fred	Ag-So	Atkins
England, Pauline	Ed-Sp	Neosho, Mo.
Eppes, Geneva	A-Mu	Benton
Eskew, Henry C.	A-Sp	Augusta
Evans, A. Olin	E-J	Arkadelphia
Evans, John Sid	E-F	Ola
Evatt, Blanche A.	Ed-So	Waldron
Ewart, Alma	Ed-F	West Helena
Faison, Bert L.	A-F	Texarkana
Faisst, Herbert	A-J	Benton
Falconer, Armistead F.	Ag-F	Fort Smith
Falls, Marvin R.	Ag-F	Pottsville
Farmer, Joseph K.	A-F	Newport
Felton, Fern	A-F	Fayetteville
Felton, Lula	A-J	Fayetteville
Felton, Ruth	A-F	Fayetteville
Ferguson, Christelle	A-Sr	Homer, La.
Fewkes, Alma L.	A-F	Hot Springs
Fincher, Lawrence G.	A-Sp	Waldo
Finkbeiner, Herman W.	E-F	Silica
Fish, Roy Jason	E-J	Garnett
Fisher, Doris	Ed-So	Little Rock
Fisher, Merlin	A-Sr	Hazen
Flinn, Heber Howard	Ag-Sr	Little Rock
Ford, Clarence B.	A-Sr	Searcy
Ford, Mabury W.	A-F	Ozark
Fore, Vernon	A-F	Emmett
Forrest, Clay	Ag-F	Siloam Springs
Forrester, Charlie V.	A-Mu	Waldron
Freeman, Leslie	Ed-So	Marianna
Freyschlag, Jessie	Ed-F	Fayetteville
Fulbright, Jack	A-F	Fayetteville
Fulbright, Lucille	A-Mu	Fayetteville
Fulkerson, Ida Belle	Ed-F	Prairie Grove
Fulkerson, J. Otis	E-T	Prairie Grove
Fuller, Ruth	A-F	Fayetteville
Furr, Beatrice I.	A-F	Arkansas City
Fuzzelle, Klyce	E-Sp	Rogers
Gaffney, Claude	E-F	Eudora
Gage, Margaret	Ed-So	Horatio
Gaines, Benjamin P.	E-F	Lake Village
Galvin, Leo	A-F	Stuttgart
Gatewood, Edwin M.	E-F	Malvern
Gee, Slayton	E-F	Ravenden
Gibson, Freeman I.	A-Gr	Savannah, Ga.
Gibson, Thomas A.	A-J	Black Rock
Gilbreath, Bernice	A-J	Fayetteville
Gilliam, Eleanor Russie	A-F	Lockesburg
Gilmore, Lucille	Ag-Sr	Fayetteville
Gold, Marjorie A.	A-J	Fayetteville
Gold, Paul	A-F	Fayetteville
Gollaher, Pearl	Ed-So	Fayetteville
Goode, Fannie Belle	A-J	Helena

Name	Course	Home Address
Goodwin, Jefferson A.	Ag-F	Charleston
Gordon, Minor	Ag-F	Prescott
Gorg, R. A.	A-Sr	St. Louis, Mo.
Gosdin, William E.	E-Sp	Little Rock
Govan, Doll	A-Sp	Helena
Goza, Henslie D.	E-J	Pine Bluff
Grabiell, Ruth	Ed-J	Fayetteville
Graham, Gus	A-F	Tuckerman
Grayson, William B.	A-So	Paragould
Greaves, Bernice	A-J	Fayetteville
Greaves, Robert	Ag-Sp	Fayetteville
Greenhaw, Mary	A-J	Fayetteville
Gregg, Carolyn	A-F	Fayetteville
Grubbs, Ardelle	Ed-F	Wilmar
Guinn, Rachel	Ed-F	Fayetteville
Guthrie, Fred E.	A-Sp	Prescott
Hale, Harvey S.	Ag-So	Prescott
Hall, Alma	Ed-F	Peterpender
Hall, Frances	Ed-F	Fayetteville
Hall, Frank Preston	A-F	Fayetteville
Hall, Mabel	Ed-So	Waldron
Hall, Willis T.	Ed-F	Mountain View
Hamilton, Georgia Ray	Ag-F	Fayetteville
Hamilton, Eileen	Ed-So	Fayetteville
Hamilton, Scott D.	A-J	Fayetteville
Hannah, Paul D.	E-So	Fayetteville
Hansard, Harry	E-F	Fayetteville
Harder, Thomas L.	Ag-F	Newport
Hardin, Temple	A-F	Fort Smith
Harding, Horace H.	E-F	Fayetteville
Harper, Constance	Ed-So	Hot Springs
Harper, La Verne	Ed-F	Hot Springs
Harrell, Tracy Lee	Ag-J	Lewisville
Harrington, Alice	Ag-Sr	Fayetteville
Harrington, Jeanette	Ed-F	Fayetteville
Harris, Carolyn	Ed-So	Newport
Harris, Hadley	A-Gr	Fayetteville
Harris, Robert D.	A-J	Fayetteville
Harrison, Clyrene	A-F	Mena
Hart, Ethel	A-F	Little Rock
Harvey, Edward	A-F	Bluff City
Harvey, Ruby	A-Mu	Waldron
Harvey, Robbin	A-Gr	Booneville
Hassell, Eugene G.	A-F	Searcy
Hawkins, Luther B.	Ag-F	Huttisville
Hay, Walker C.	A-J	Fayetteville
Haynes, James H.	E-F	Pine Bluff
Haynie, Otis R.	A-F	Prescott
Haynie, Lawrence E.	A-F	Prescott
Hays, Brooks	A-So	Russellville
Hays, Hazel	A-Sp	Okolona
Hays, Hugh R.	E-F	Fayetteville
Heard, Roger Q.	Ag-Sp	Dyer
Heath, Irwin J.	Ag-J	Magnolia
Hedrick, Gideon	Ag-So	Fayetteville
Heerwagen, Paul K.	Ag-Sp	Fayetteville
Hemphill, Mary	A-J	Richmond
Henderson, Everett L.	E-So	Rogers
Henderson, Walter D.	E-So	Lone Wolf, Okla.
Henry, R. Floyd	A-F	Russellville
Henson, Harold E.	A-So	Springdale
Henson, John A.	A-Sr	Judsonia
Henson, Louis E.	A-F	Springdale
Herring, Gillis G.	Ed-So	Warren

Name	Course	Home Address
Higgs, Jere Will	E-J	DeQueen
Hight, Virginia	A-F	Fayetteville
Hilton, Amelia	A-So	Pueblo, Colo.
Hinds, Hubert	Ag-So	Fayetteville
Hinton, Clifton B.	Ed-So	Stamps
Hodges, Bess	Ed-So	Westville, Okla.
Hoeltzel, Pauline A.	A-So	Little Rock
Holden, Robert G.	A-F	Newport
Hollabough, Ernest	E-T	Marshall
Hollabough, Gladys	A-J	Marshall
Hollette, B. Otho	A-So	Fayetteville
Hollett, Carol E.	Ed-So	Fayetteville
Hollett, Charles	A-F	Fayetteville
Holt, W. Braz	Ag-F	Harrison
Holt, Larkin	E-F	Harrison
Hon. Mildred	Ed-So	Fort Smith
Hon. Sarah	A-Mu	Hon
Hood, Edna	Ed-F	Russellville
Hooper, Doyl G.	A-Sp	Subiaco
Hornibrook, Mildred	A-Mu	Little Rock
Horsten, Fred	A-Sp	Fayetteville
Howell, Ruth I.	A-J	Foreman
Hoye, Grace	Ed-F	Clarksville
Hudgins, Doris	Ed-F	Texarkana
Hurlock, Lloyd	A-Sp	Siloam Springs
Hurst, Floye	A-J	Fayetteville
Hurt, D. J.	E-T	Little Rock
Husky, Hiram W.	A-F	Blevins
Huston, Mary May	Ag-Sr	Fayetteville
Illian, Harry	E-F	Russellville
Illing, Leo M.	A-J	Little Rock
Imon, Neil C.	E-F	Pine Bluff
Irby, Annie	Ed-F	Wesson
Irby, Pet	Ed-F	Wesson
Irby, Guy	E-J	Muskogee, Okla.
Jackson, Walter R.	A-F	Little Rock
Jacobs, Royle Wood	E-T	Fayetteville
Jacobson, Waldo V.	A-J	Mobridge, S. D.
Jeffery, Roy N.	Ag-F	Mount Olive
Jelks, Clarence Clay	Ed-Sr	Augusta
Jenkins, Catherine	A-Sr	Little Rock
Johns, Everett	E-F	Paris
Johnson, Byron E.	Ag-Sr	Waldo
Johnson, Madge	Ed-F	Highfill
Johnson, Scot	A-J	Fort Smith
Johnston, Ray	Ag-F	Biggers
Jones, D. Webster	Ag-Sr	Little Rock
Jones, Egbert A.	Ag-Sp	Fayetteville
Jones, Ira B.	Ag-F	Fayetteville
Jones, Reece W.	Ag-Sp	Fayetteville
Jory, Sam	E-So	Fayetteville
Keck, Charlotte G.	Ed-F	Harrison
Keener, Edith	Ed-So	Harrison
Kennard, Robert C.	A-F	Fayetteville
Kernodle, Mary C.	A-So	Fort Smith
Kerr, Sarah C.	A-J	Fayetteville
Kilgore, Roy	A-F	Fordyce
Kitchens, Clyde B.	A-F	Magnolia
Klausmeier, Otto Henry	E-F	Cabot
Kneeland, Ruth	A-So	Dallas, Tex.
Knight, William J.	A-F	Helena
Knoch, Lester H.	E-F	Fayetteville
Knott, John H.	E-So	Bentonville
Kone, Evelyn	Ag-Sp	Fayetteville



Name	Course	Home Address
Koonce, Lynne	Ed-F	Pine Bluff
Kuhnert, Ruth E.	Ed-F	Springdale
Lake, Lyda	Ed-F	Fayetteville
Lake, Mary	Ed-F	DeQueen
Lambert, Betty	A-Ar	Helena
Lamberton, Mattie	Ed-J	Harrison
Landrum, John B.	A-So	Paragould
Lanier, John T.	Ag-J	Forrest City
Lawson, Edwin Hugh	A-F	Nashville
Lawson, Hugh M.	A-J	Fayetteville
Leach, Luther O.	A-J	Scranton
Lee, Arthur F.	Ag-Sr	Little Rock
Lee, Cornelia	Ed-F	Dumas
Lee, Mary	Ed-F	Fayetteville
Lee, William M.	Ag-F	Centre Point
Leeper, Grace	Ed-F	DeQueen
Leiper, Hugh N.	A-F	Malvern
Lenox, Pauline	Ed-F	Pendleton
Lester, Mack	Ag-F	Lewisville
Leverett, Donna B.	Ed-So	Fayetteville
Lewis, Madge	Ed-So	Fayetteville
Ligon, William B.	A-F	Amity
Lipscomb, John S.	E-Sp	Bigelow
Little, Hamilton E.	A-Sp	Blytheville
Little, Jane E.	Ed-F	Texarkana
Little, John J.	Ag-So	Conway
Lockharte, Mildred	Ed-F	Clarendon
Logan, Robert R.	E-So	Fayetteville
Love, George R.	Ag-Sp	Rogers
Lucas, Eva Avice	Ed-F	Fayetteville
Lucas, Henry A.	Ag-So	Fayetteville
Lutterloh, Charles H.	A-So	Jonesboro
Lyle, James E.	Ag-F	Helena
Machen, Hughes	E-F	Magnolia
Maddox, Lila Mae	A-F	Little Rock
Manning, John Eber	Ed-Sp	Haynes
Markwell, Kenneth W.	E-F	Bigelow
Marsh, Georgia	A-Mu	Prescott
Marshall, John W.	E-F	El Dorado
Marshall, Maxine	Ed-F	Rogers
Martin, Edith	Ag-F	Pocahontas
Martin, Paul	E-F	Jacksonville
Martin, Lansford	E-F	Jacksonville
Mason, Thomas A.	A-So	Bradford
Massengale, Lura	A-F	Fayetteville
Massey, Joe B.	A-J	Morrilton
Mastin, Theresa	A-Ar	Fayetteville
Mather, Juliette Edla	A-Sr	Fayetteville
Mathews, Earl B.	A-So	Lewisville
Mathews, Verda Park	A-Mu	El Reno, Okla.
McAdams, Alberta	A-Mu	Fayetteville
McBride, Lillie Mae	Ed-F	Fort Smith
McCain, Edward A.	A-So	Prescott
McCaleb, T. Maxey	A-So	Williford
McCartney, Norman A.	A-So	Fayetteville
McCartney, Paul	Ag-Sp	Fayetteville
McCoy, Aileen	Ag-J	Fayetteville
McCullough, Edith	A-Ar	Fayetteville
McCullough, Gladys	A-F	Fayetteville
McCullough, Robert	A-F	Siloam Springs
McDonald, Dorothy	A-J	Fayetteville
McGaughey, James P.	A-So	Pine Bluff
McGaughey, John Bell	E-Sr	Pine Bluff
McGill, Joseph T.	Ag-So	Chidester

Name	Course	Home Address
McGill, Sarah	A-F	Chidester
McIlroy, Mertye B.	A-Sp	Fayetteville
McKennon, Joe L.	A-F	Dumas
McKnight, David A.	A-Sr	Cane Hill
McKnight, Minnie Lou	Ed-F	Augusta
McLachlen, Roy L.	E-F	Huntington
McLaughlin, Clair	Ed-F	Hot Springs
McLees, Willie	Ed-So	Little Rock
McRae, Kenneth	A-F	Hope
Meadows, Coy T.	E-So	Danville
*Mehlburger, Gertrude	A-Sr	Fort Smith
Mendenhall, Mildred	Ed-F	Rosston
Mendenhall, Ruby	Ag-Sr	Rosston
Merrill, Walter D.	Ag-J	Rogers
Merrit, N. Everett	A-Sp	Hot Springs
Metzger, Emma Louise	A-F	Morrilton
Mickel, Melba	Ed-F	Van Buren
Middlebrooks, Pearl	A-J	Hope
Milburn, Bryan L.	A-J	Fayetteville
Milburn, John B.	E-J	Fayetteville
Millar, Paul H.	Ag-Sr	Little Rock
Miller, Alma	Ed-So	Harris
Miller, Bertrand B.	A-F	Dardanelle
Miller, Fanita	A-F	Huntington
Miller, Turner	A-F	Harris
Milton, Wallace M.	E-J	Ozark
Minmier, George	E-F	Paris
Mitchell, Emmett E.	A-J	Morrilton
Mitchell, William Moore	A-J	Morrilton
Mitchell, Winnie	Ed-F	Carrollton
Mixon, Andrew H.	Ag-So	Marianna
Moffitt, James Wm.	A-F	Fayetteville
Moffitt, John A.	A-So	Fayetteville
Molloy, John	E-T	Clarksville
Montague, Margaret W.	Ed-F	Fort Smith
Monteath, Mabel	Ed-F	Little Rock
Moody, Byron C.	A-F	Prescott
Moody, Julius C.	E-J	Bald Knob
Moody, Powel C.	E-F	Bald Knob
Moore, Daniel	A-F	Newark
Moore, George F.	E-F	Gurdon
Moore, John Ike	A-J	Helena
Moore, Verda	Ed-So	Rogers
Morgan, Gladys	A-Sp	Little Rock
Morgan, Robert E.	Ed-J	Tulsa, Okla.
Morrow, Franklin H.	E-So	Piggott
Morton, Ruth	A-Sr	Fort Smith
Morton, Mamie	Ag-Sp	Fayetteville
Mott, Henry	E-So	Fayetteville
Mullins, Hugh A.	E-T	Fayetteville
Mullins, William E.	A-So	Texarkana
Mulrenin, Bernard Cass	E-F	Fayetteville
Munn, William T.	A-F	Rosston
Murphy, Foy C.	E-F	Greenwood
Murphey, Sallie	Ed-F	New Edinburg
Murray, Woody	A-F	Knoxville
Mussellman, Ada	Ed-F	Baldwin
Myers, Carlton B.	A-Sr	Helena
Nance, Cleonas	Ag-F	Greenwood
Neelly, Virginia	Ag-So	Fayetteville
Nelson, Irene	Ag-J	Fayetteville
Nelson, Will E.	E-J	Fayetteville

\*Deceased.

## LIST OF STUDENTS

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Name	Course	Home Address
Nesbitt, James M.	A-So	Jonesboro
Newman, Stanley M.	E-F	Helena
Newsom, Joel	E-F	Paragould
Norman, Eliza	A-Mu	Hamburg
Nichol, Leo A.	Ag-So	Pine Bluff
Northum, Eula	Ed-F	Charleston
Norwood, Ellen	A-Sr	Little Rock
Nyegaard, John W.	Ed-F	Fayetteville
Oates, Franklin B.	Ag-Sr	Pottsville
O'Bar, Blanche	Ed-So	Charleston
O'Bar, Dora M.	Ed-F	Charleston
O'Kelley, Joseph F.	Ag-F	Blue Mountain
Oldham, William K.	Ag-Sp	Pettus
Oliver, Fred	Ag-So	Eureka Springs
Oliver, William L.	A-F	Corning
O'Neal, Ernest P.	E-J	Hope
Overstreet, Elizabeth	A-Sr	Little Rock
Owen, Bernice F.	A-F	Shamrock, Okla.
Owen, Walter T.	Ag-F	Lonoke
Owsley, Kate.	A-F	Greenwood
Pape, Frank D.	E-Sr	Van Buren
Parker, Donald	E-F	Fayetteville
Parker, Elmo L.	E-J	Cleveland
Parsley, Orlo D.	E-T	Fayetteville
Paslay, Cecil	A-F	Moro
Payne, Elmer R.	E-So	Forrest City
Peden, Orchid	A-J	Fayetteville
Peel, Frank W.	A-F	Bentonville
Pender, Roy C.	A-Sp	Hazen
Perdue, Gordon A.	A-So	Pine Bluff
Perdue, J. Newton	A-So	Wilmott
Peters, Charlotte V.	A-F	Little Rock
Pettigrew, Thomas A.	A-F	Charleston
Philbrick, Leighton A.	E-F	Fayetteville
Pierce, Lewis O.	Ed-So	Harrison
Pinnell, Bill	A-Sp	Roff, Okla.
Polk, Joe T.	A-F	Fayetteville
Polk, M. Linda	A-Sr	Fayetteville
Porter, Paul L.	E-J	Fayetteville
Porterfield, Laura	Ed-F	Fayetteville
Porterfield, Neva	Ed-F	Fayetteville
Prather, Doris	Ed-F	Fort Smith
Prather, Marian	Ed-So	Fort Smith
Pratt, Evangeline	Ed-So	Fayetteville
Pratt, Mrs. O. A.	A-Sp	Fayetteville
Pritchett, Howard	E-F	Leslie
Ptak, James	A-F	Fayetteville
Pyeatte, George P.	E-F	Cane Hill
Pyeatte, Henrietta	Ed-F	Cane Hill
Pyle, Helen Louise	Ed-F	Fort Smith
Quaile, Beatrix	A-Sr	Fort Smith
Ragsdale, John G.	A-So	Cairo
Ramsay, William F.	E-So	Nashville
Ramsey, Eugene	Ed-So	Fayetteville
Ramsey, Marion Adele	A-J	Fayetteville
Rankin, Fay S.	A-J	Jonesboro
Rawlings, A. J.	Ed-Sr	Judsonia
Reed, Arizona	Ed-F	Mena
Reed, Courtney A.	A-F	Magnolia
Reed, Reuben	Ag-Sp	Greenwood
Reichardt, Chris	E-So	Fort Smith
Reid, George H.	A-Sp	Fort Smith
Reid, Willis E.	A-Sp	Fort Smith
Reynolds, Howard D.	A-F	Ozark

Name	Course	Home Address
Reynolds, Walter D.	A-So	Thomson, Ga.
Rhodes, Kathleen	Ed-F	Green Forest
Rice, Alan Walker	E-T	Fayetteville
Rice, Donald M.	E-So	Fayetteville
Richardson, John E.	A-I	Fayetteville
Ritchie, Isaac H.	A-F	Hardy
Roark, Granville W.	A-Gr	Ames, Iowa
Robbins, Leo	A-Sp	Ozan
Robbins, Ruth E.	Ed-F	Mena
Robinson, Chloera	Ed-F	Dutch Mills
Robinson, Hale H.	E-J	Hope
Robinson, James E.	A-F	Lonoke
Rogers, Richard T.	Ag-F	Paragould
Roney, Nannie May	Ed-F	Hamburg
Ross, Una M.	Ed-So	Charleston
Royer, Joe	E-F	Jacksonville
Ruble, Flavy	Ag-F	Harrison
Rucker, Boise E.	A-Sp	Bauxite
Rudolph, Ione	Ed-F	Fayetteville
Russell, Jean	A-So	Pine Bluff
Ryan, Rose	Ed-So	Fort Smith
Rye, Stephen	Ag-Sp	Van Buren
Sailor, Lela Pearl	A-J	Bigelow
Sailor, Vance L.	A-Sr	Bigelow
Sanders, Carrel B.	Ed-Sp	Spring Valley
Sanders, Mayme	Ed-F	Fayetteville
Sanderson, Sibyl	A-Mu	Texarkana
Sandlin, John Calvin	E-Sp	Ola
Sanford, Bess Lee	A-J	Pine Bluff
Scarlett, Winton C.	E-J	Russellville
Schaer, Kathleen C.	Ed-F	Hot Springs
Schaller, George	E-T	Evansville, Ind.
Schauber, Alice M.	A-J	Laurel, Miss.
Scott, Jean	Ed-F	Helena
Scott, Mary Louise	Ag-F	Prescott
Scott, Moses B.	Ag-F	Fort Smith
Screeeton, Earl J.	A-Ar	Hazen
Scurlock, Stella	A-Sr	Piggott
Searcy, Robert L.	A-So	Lewisville
Sears, Otis B.	A-Sp	Fayetteville
Sellers, Mary Dale	A-F	Morrilton
Shackleford, John M.	A-So	Little Rock
Shadrach, William S.	A-Sp	Kingsland
Sharp, James E.	A-Sr	Prairie Grove
Shelton, George C.	A-F	Taylor
Shinn, William D.	A-F	Harrison
Shumaker, Clarence A.	E-So	Little Rock
Sibley, Velma Catherine	Ed-F	Pine Bluff
Simco, Allie	A-Sr	Fayetteville
Simmons, Una	A-Mu	Benton
Simms, Lucie C.	A-Sr	Little Rock
Simpson, Gussie	A-Mu	Hamburg
Simpson, Floyd B.	A-So	Fayetteville
Simpson, John D.	Ed-F	Summers
Simpson, Virdelle	Ed-So	Hamburg
Sims, Beatrice	A-Gr	Fayetteville
Sims, Kate	Ed-F	Pine Bluff
Sims, Mary Charlotte	A-F	Fayetteville
Skaggs, Lester	Ag-So	Rogers
Skaggs, Norris R.	A-F	Fayetteville
Skillen, John	E-T	Fayetteville
Slaughter, Bernice	Ed-F	Springdale
Smiley, Leona E.	Ed-F	Carlisle
Smith, Carr	Ag-Sr	Fayetteville

Name	Course	Home Address
Smith, Douglas O.	Ed-So	Waldron
Smith, George A.	E-Sp	Fort Smith
Smith, Isabelle K.	A-So	Fayetteville
Smith, Lydle P.	Ag-So	Siloam Springs
Smith, Mathew Mann	A-So	Dallas, Tex.
Smith, May	A-J	Fayetteville
Smith, Myrtle	A-Mu	De Queen
Smith, Norman M	E-So	Pine Bluff
Smith, Ruth C.	A-Sr	Lowell
Smith, Velma	A-So	Paris
Solomon, Victor N.	A-F	Helena
Sparks, John P.	E-So	Fordyce
Spires, Allie	Ed-F	Rector
Stacey, John	Ag-F	Fayetteville
Stansbury, Ernest E.	E-F	Little Rock
Stansbury, William B.	E-T	Little Rock
Starbird, Levi	E-F	Alma
Stauber, Cyrus A.	Ag-F	Noel, Mo.
Stearns, Bryan	Ag-J	Fayetteville
Stephens, Ada	A-F	Fayetteville
Stevenson, Ernest E.	A-J	Pottsville
Stevenson, James E.	Ag-Sr	Dardanelle
Stewart, Olive M.	Ed-So	Van Buren
Stokes, William I.	E-F	Clarksville
Strickland, Henry Leo	Ag-F	Atkins
Stuart, George B.	A-So	Tekarkana
Stuart, Senter W.	Ag-F	Batesville
Styron, Mary	Ed-So	Monticello
Sugg, Roscoe	A-So	Belleville
Sullivan, Mary Clara	A-Mu	Osceola
Summers, Thomas L.	Ag-So	Augusta
Taber, Margaret	Ag-Sp	Fayetteville
Takata, Nina I.	E-Gr	Kobe, Japan
Tanner, Albert N.	A-F	Helena
Tanner, Joe L.	A-Sr	Blytheville
Taylor, Austin B.	A-F	Little Rock
Taylor, Beloit	A-So	Corning
Taylor, Charles E.	A-J	Little Rock
Taylor, Elizabeth	Ed-So	Siloam Springs
Taylor, Mrs. F. G.	A-F	Little Rock
Teague, Willis L.	E-J	Amity
Teeter, Hazel	Ed-F	Fayetteville
Thomas, Bryan	A-F	Foreman
Thomas, James W	Ed-F	Branch
Thomas, Zelma	Ed-F	Benton
Thompson, Newton F.	E-F	Clarksville
Tillman, Walter C.	A-F	Roe
Torbett, Harrie E.	Ag-F	Avoca
Towery, Saul I.	E-F	Texarkana
Towler, H. Speight	A-F	Fordyce
Townsend, Harold W.	A-So	Mammoth Springs
Treadway, Alex H.	E-F	Ozark
Trimble, James W.	A-Sr	Osage
Turner, Bolon Bailey	A-F	Little Rock
Turner, William O.	E-So	Lonoke
Tushek, Rudolph	E-So	Lake Village
Tyler, Floyd F.	A-Sr	Excelsior
Tyson, Lucille	Ed-So	Harrison
Vestal, Charles H.	Ag-F	Little Rock
Vickers, Cora	Ed-So	Fayetteville
Vineyard, Marion	Ed-So	Helena
Vinson, Clyde	A-So	Colt
Volentine, Lester	Ag-F	Charleston
Wade, Junius S.	E-So	Augusta

Name	Course	Home Address
Wakefield, Elmer Glenn	A-F	Nashville
Walker, Charles W.	A-F	Carlsbad, N. M.
Walker, J. Byrnes	A-F	Fayetteville
Walkup, Robert M.	A-Sr.	Havana
Wallace, Albert	E-F	Fayetteville
Wallace, Louise	Ed-F	Magnolia
Ward, Zora	Ed-So	Fayetteville
Warner, William P.	E-J	Fayetteville
Warren, Gladys Helen	A-Sp	Pine Bluff
Watts, Charlotte	Ed-F	Prairie Grove
Watts, Edith	Ed-F	Prairie Grove
Weaver, Charles J.	E-F	Hot Springs
Webb, Mabel	A-F	Fayetteville
Webb, Ray	Ed-So	Fayetteville
Weld, Dana P.	A-Sr	Little Rock
Wheat, Thomas W.	Ag-F	Lonoke
Whitaker, Lee	E-Sp	Houston
White, Eddie Sonora	A-Sr	Fayetteville
White, Emma	Ed-So	Dumas
Wiggs, Virginia	Ed-F	Russellville
Wilbourn, W. Clarence	A-F	Paragould
Wilkerson, C. K.	Ed-J	Fayetteville
Wilkerson, Samuel	Ag-Sp	Conway
Wilkinson, Aubrey	Ed-F	Palestine
Wilkinson, Margaret	Ed-Sr	Fayetteville
Williams, James F.	A-F	Atkins
Williams, Kate	Ed-F	Jacksonport
Williams, Naomi	A-Sp	Fayetteville
Williams, Walter E.	Ag-F	Morrilton
Willis, Richard B.	E-Sp	Fayetteville
Willis, Robert B.	Ag-J	Valley Springs
Willis, Virgil D.	Ed-F	Valley Springs
Willson, Grace Adele	A-Mu	Ola
Willson, Nena Baxter	Ed-So	Hulett, Wyoming
Wilson, Arthur L.	E-Sr	Cabot
Wilson, Autrey P.	A-F	Prairie Grove
Wilson, Carl V.	Ed-F	Fayetteville
Wilson, Louise	Ed-F	Fayetteville
Wilson, Margaret	A-J	Russellville
Wilson, Oliver P.	Ag-F	Rogers
Wilson, Robert B.	E-F	Russellville
Wilson, William	Ag-J	Beebe
Winfrey, George W.	Ag-J	Fayetteville
Winkelman, Ben H.	A-F	Fayetteville
Witt, Gibson	A-J	Hot Springs
Wolf, Bess P.	A-Sr	Paris
Wolf, Kate	A-Mu	Mountain Home
Womack, Lois	A-Mu	De Queen
Wood, Roscoe	A-J	Ashdown
Woody, Sue	Ag-J	Fayetteville
Woodson, Earl M.	A-F	Poteau, Okla.
Woodward, F. Savoy	A-F	Ozark
Wooten, William R.	E-J	Russellville
Wozencraft, Anna J.	Ed-So	Fayetteville
Yates, Frances	A-Mu	Little Rock
York, Harvey A.	Ag-J	McCaskill
Young, Estelle	Ed-So	Camden
Zoll, Allen A.	A-J	Fayetteville



## TRAINING HIGH SCHOOL

1916-1917

Alford, Elbert  
Askew, Ben  
Bone, Ona  
Boyd, Bernice  
Bracey, Alfred  
Burnip, Burton  
Cannon, Maude  
Colbert, James  
Colbert, Katherine  
Curtis, Howard  
Davis, Anna Belle  
Davis, Opal  
de Roulhac, Jean  
Dowell, Ralph  
Dyer, Ruth  
Earle, Baylis  
Echols, Virginia  
Farmer, Leslie  
Gillespie, Ila Mae  
Gregory, Lula  
Hanna, Sybil  
Harris, Alva  
Holcomb, Crawford  
Jeffery, Nina  
Johnson, Ben  
Johnson, Marvin  
Johnson, Mary  
Jones, Beulah  
Yones, Mrs. I. B.

Kone, Evelyn  
Lewis, Odell  
Liebolt, Weldon  
Martin, Mary  
Martin, Rowland  
Mayes, Blanch  
McGill, Annie  
McGill, Josephine  
Miller, Dratie  
Neale, Agnes  
Parsley, Pansy  
Paul, Ray  
Petty, Sarah  
Pond, Burney  
Pond, Jewell  
Robins, Leo  
Rudolph, Winifred  
Seamster, Dora  
Simpson, Lucile  
Stauber, Joe  
Stuckey, Willy  
Thayer, Corriila  
Thomas, Charles  
Waddell, Hammond  
Walker, Jack  
Weir, Otis  
Wilkinson, Banks  
Wolf, Ruby  
Woodward, F. Savoy

## SUMMARY

<i>College of Arts and Sciences:</i>		320
Graduates	7	
Seniors	34	
Juniors	57	
Sophomores	48	
Freshmen	121	
Specials	28	
Art	4	
Music	21	
<i>College of Engineering:</i>		141
Graduates	1	
Seniors	4	
Juniors	22	
Sophomores	32	
Freshmen	57	
Specials	9	
Trade Courses	16	
<i>College of Agriculture:</i>		113
Seniors	16	
Juniors	18	
Sophomores	18	
Freshmen	41	
Specials	20	
<i>College of Education:</i>		171
Graduates	1	
Seniors	5	
Juniors	8	
Sophomores	52	
Freshmen	100	
Specials	4	
	Total	745
	Duplications	14
Winter Session:		731
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	Total	1038
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Maple Street

Goodland Avenue

Arkansas Avenue

Dickson Street

Track

Athletic Field

# CAMPUS UNIVERSITY of ARKANSAS

1. Ella Gamall Hall
2. Flackbady Hall
3. Chemistry Building
4. Green House
5. Agriculture Building
6. Extension Office
7. Experiment Station
8. Hospital
9. Mill Hall
10. Gray Hall
11. Bohannon Hall
12. Bath House
13. Shops
14. Engineering Hall
15. Dairy Building
16. Transformer
17. Ground Station
18. Residence Foreman of Farm
19. Barns
20. Bleachers
- A B C D Tennis Courts

